VPDES PERMIT PROGRAM FACT SHEET
FILE NO: 274

This document gives pertinent information concerning the VPDES Permit listed below. This permit is being processed as a **MAJOR, MUNICIPAL** permit.

1. **PERMIT NO.: VA0081264** **EXPIRATION DATE: 10/25/12**

2. **FACILITY NAME AND LOCAL MAILING ADDRESS**

Hampton Roads Sanitation District
Chesapeake-Elizabeth STP
1436 Air Rail Ave
Virginia Beach, VA 23455

FACILITY LOCATION ADDRESS (IF DIFFERENT)

5332 Shore Drive
Virginia Beach, VA 23455

CONTACT AT FACILITY:
NAME: Dr. James Pletl
TITLE: Director of Water Quality
PHONE: (757)460-2261

CONTACT AT LOCATION ADDRESS
NAME: N/A
TITLE:
PHONE: ( )

3. **OWNER CONTACT**: (TO RECEIVE PERMIT)
NAME: Mr. Edward G. Henifin
TITLE: General Manager
COMPANY NAME: HRSD
ADDRESS: PO Box 5911
Virginia Beach VA 23471
PHONE: (757)460-2261

CONSULTANT CONTACT:
NAME: N/A
FIRM NAME:
ADDRESS:

PHONE: ( )

4. **PERMIT DRAFTED BY**: DEQ, Water Permits, Regional Office

Permit Writer(s): Deanna Austin DOA Date(s): 12/27/11-2/7/12
Reviewed By: Mark Sauer MS Date(s): 2/15/12

5. **PERMIT ACTION:**

( ) Issuance (X) Reissuance ( ) Revoke & Reissue ( ) Owner Modification
( ) Board Modification ( ) Change of Ownership/Name [Effective Date:]

6. **SUMMARY OF SPECIFIC ATTACHMENTS LABELED AS:**

Attachment 1	Site Inspection Report/Memorandum
Attachment 2	Discharge Location/Topographic Map
Attachment 3	Schematic/Plans & Specs/Site Map/Water Balance
Attachment 4	TABLE I - Discharge/Outfall Description
Attachment 5	TABLE II - Effluent Monitoring/Limitations
Attachment 6	Effluent Limitations/Monitoring Rationale/Suitable Data/Antidegradation/Antibacksliding
Attachment 7	Special Conditions Rationale
Attachment 8	Toxics Monitoring/Toxics Reduction/WET Limit Rationale
Attachment 9	Receiving Waters Info./Tier Determination/STORET Data/Stream Modeling
Attachment 9	303(d) Listed Segments
Attachment 10	TABLE III(a) and TABLE III(b) - Change Sheets
Attachment 11	NPDES Industrial Permit Rating Worksheet and EPA Permit Checklist
Attachment 12	Chronology Sheet
Attachment	Public Participation

APPLICATION COMPLETE: 2/1/12 (DSS) VDH approval letter on 1/10/12)

7. **PERMIT CHARACTERIZATION**: (Check as many as appropriate)

(X) Existing Discharge
( ) Proposed Discharge
(X) Municipal
SIC Code(s) 4952
( ) Industrial
SIC Code(s)
(X) POTW
( ) PVOTW
( ) Private
( ) Federal
( ) State
( ) Publicly-Owned Industrial

(X) Effluent Limited
(X) Water Quality Limited
( ) WET Limit
( ) Interim Limits in Permit
( ) Interim Limits in Other Document
( ) Compliance Schedule Required
( ) Site Specific WQ Criteria
( ) Variance to WQ Standards
( ) Water Effects Ratio
(X) Discharge to 303(d) Listed Segment
(X) Toxics Management Program Required
( ) Toxics Reduction Evaluation
( ) Storm Water Management Plan
(X) Pretreatment Program Required
( ) Possible Interstate Effect
(X) CBP Significant Dischargers List

8. **RECEIVING WATERS CLASSIFICATION**: River basin information.

Outfall No(s): 001

Receiving Stream:	Chesapeake Bay
River Mile:	7-CHE 007.89
Basin:	Chesapeake Bay, Atlantic Ocean & Small Coastal Basins
Subbasin:	NA
Section:	3
Class:	II
Special Standard(s):	a
Tidal:	YES
7-Day/10-Year Low Flow:	MGD
1-Day/10-Year Low Flow:	MGD
30-Day/5-Year Low Flow:	MGD
Harmonic Mean Flow:	MGD

Outfall No(s): 002-004

Receiving Stream:	Little Creek Harbor to Chesapeake Bay
River Mile:	7-LTC 000.67
Basin:	Chesapeake Bay, Atlantic Ocean & Small Coastal Basins
Subbasin:	NA
Section:	3a
Class:	II
Special Standard(s):	a, z
Tidal:	YES
7-Day/10-Year Low Flow:	MGD
1-Day/10-Year Low Flow:	MGD
30-Day/5-Year Low Flow:	MGD
Harmonic Mean Flow:	MGD

9. **FACILITY DESCRIPTION:** Describe the type facility from which the discharges originate.

Existing municipal discharge resulting from the discharge of treated domestic sewage.

10. **LICENSED OPERATOR REQUIREMENTS**: ( ) No (X) Yes Class: 1

11. **RELIABILITY CLASS**: I

12. **SITE INSPECTION DATE**: 5/13/2010 **REPORT DATE**: 5/21/2010
Performed By: Steve Long-DEQ TRO Inspections

SEE ATTACHMENT 1

13. **DISCHARGE(S) LOCATION DESCRIPTION**: Provide USGS Topo which indicates the discharge location, significant (large) discharger(s) to the receiving stream, water intakes, and other items of interest.

Name of Topo: Little Creek Quadrant No.: 34B **SEE ATTACHMENT 2**

14. **ATTACH A SCHEMATIC OF THE WASTEWATER TREATMENT SYSTEM(S) [IND. & MUN.]. FOR INDUSTRIAL FACILITIES, PROVIDE A GENERAL DESCRIPTION OF THE PRODUCTION CYCLE(S) AND ACTIVITIES. FOR MUNICIPAL FACILITIES, PROVIDE A GENERAL DESCRIPTION OF THE TREATMENT PROVIDED.**

Narrative: The sewage treatment works consists of preliminary treatment (septage receiving, mechanical screens, flow metering and vortex grit removal), secondary treatment (polymer feed, fine bubble aeration tanks, secondary clarification, return solids recycle, chemical phosphorus removal), and disinfection by chlorination followed by dechlorination of the final effluent prior to discharge into the Chesapeake Bay via final effluent pumps. Solids handling consists of sludge gravity thickening, centrifuge dewatering and incineration. Ash is sent to a landfill or used in recycling by the disposal contractor. **SEE ATTACHMENT 3**

15. **DISCHARGE DESCRIPTION**: Describe each discharge originating from this facility.

SEE ATTACHMENT 4

16. **COMBINED TOTAL FLOW**:

TOTAL: 24.01 MGD (for public notice)

NONPROCESS/RAINFALL DEPENDENT FLOW: 0.011 (Est.)

DESIGN FLOW: 24 MGD (MUN.)

17. **STATUTORY OR REGULATORY BASIS FOR EFFLUENT LIMITATIONS AND SPECIAL CONDITIONS**:
(Check all which are appropriate)

- X State Water Control Law
- X Clean Water Act
- X VPDES Permit Regulation (9 VAC 25-31-10 et seq.)
- X EPA NPDES Regulation (Federal Register)
- X EPA Effluent Guidelines (40 CFR 133 or 400 - 471)
- X Water Quality Standards (9 VAC 25-260-5 et seq.)
- _____ Wasteload Allocation from a TMDL or River Basin Plan

18. **EFFLUENT LIMITATIONS/MONITORING**: Provide all limitations and monitoring requirements being placed on each outfall.

SEE TABLE II - ATTACHMENT 5

19. **EFFLUENT LIMITATIONS/MONITORING RATIONALE**: Attach any analyses of an outfall by individual toxic parameter. As a minimum, it will include: statistics summary (number of data values, quantification level, expected value, variance, covariance, 97th percentile, and statistical method); wasteload allocation (acute, chronic and human health); effluent limitations determination; input data listing. Include all calculations used for each outfall and set of effluent limits and those used in any model(s). Include all calculations/documentation of any antidegradation or anti-backsliding issues in the development of any limitations; complete the review statements below. Provide a rationale for limiting internal waste streams and indicator pollutants. Attach chlorine mass balance calculations, if performed. Attach any additional information used to develop the limitations, including any applicable water quality standards calculations (acute, chronic and human health).

OTHER CONSIDERATIONS IN LIMITATIONS DEVELOPMENT:

VARIANCES/ALTERNATE LIMITATIONS: Provide justification or refutation rationale for requested variances or alternatives to required permit conditions/limitations. This includes, but is not limited to: waivers from testing requirements; variances from technology guidelines or water quality standards; WER/translator study consideration; variances from standard permit limits/conditions.

SUITABLE DATA: In what, if any, effluent data were considered in the establishment of effluent limitations and provide all appropriate information/calculations.

All suitable effluent data were reviewed.

ANTIDEGRADATION REVIEW: Provide all appropriate information/calculations for the antidegradation review.

The receiving stream has been classified as tier 1; therefore, no further review is needed. Permit limits have been established by determining wasteload allocations which will result in attaining and/or maintaining all water quality criteria which apply to the receiving stream, including narrative criteria. These wasteload allocations will provide for the protection and maintenance of all existing uses.

ANTIBACKSLIDING REVIEW: Indicate if antibacksliding applies to this permit and, if so, provide all appropriate information.

There are no backsliding issues to address in this permit (i.e., limits as stringent or more stringent when compared to the previous permit
SEE ATTACHMENT 6

20. **SPECIAL CONDITIONS RATIONALE**: Provide a rationale for each of the permit's special conditions.

SEE ATTACHMENT 7

21. **TOXICS MONITORING/TOXICS REDUCTION AND WET LIMIT SPECIAL CONDITIONS RATIONALE**: Provide the justification for any toxics monitoring program and/or toxics reduction program and WET limit.

SEE ATTACHMENT 8

22. **SLUDGE DISPOSAL PLAN**: Provide a description of the sludge disposal plan (e.g., type sludge, treatment provided and disposal method). Indicate if any of the plan elements are included within the permit.

Biosolids from this facility are incinerated in one of two onsite multi-hearth incinerators. Backup includes hauling solids to the other incinerators at the HRSD

Army Base or VIP plants. In case of an emergency, solids will be hauled to an approved landfill, Bethel Landfill in Hampton, VA.

23. **MATERIAL STORED**: List the type and quantity of wastes, fluids, or pollutants being stored at this facility. Briefly describe the storage facilities and list, if any, measures taken to prevent the stored material from reaching State waters.

The materials stored onsite include sodium hypochlorite, sodium bisulfite, sodium hydroxide, ferric chloride, polymer, fuel oil, propane, ammonia, gasoline, hydrogen peroxide and diesel fuel. Materials are either stored in buildings with drains connected to the treatment system or are in contained areas. Fuel tanks are doubled walled.

24. **RECEIVING WATERS INFORMATION**: Refer to the State Water Control Board's Water Quality Standards [e.g., River Basin Section Tables (9 VAC 25-260-5 et seq.). **Use 9 VAC 25-260-140 C (introduction and numbered paragraph) to address tidal waters where fresh water standards would be applied or transitional waters where the most stringent of fresh or salt water standards would be applied.** Attach any memoranda or other information which helped to develop permit conditions (i.e. tier determinations, PReP complaints, special water quality studies, STORET data and other biological and/or chemical data, etc.

SEE ATTACHMENT 9

25 305(b)/303(d) Listed Segments: Indicate if the facility discharges to a segment that is listed on the current 303(d) list and, if so, provide all appropriate information/calculations.

This facility discharges directly to the Chesapeake Bay and Little Creek Cove. This receiving stream segment has been listed in Category 5 of the 305(b)/303(d) list for non-attainment of PCB in Fish Tissue and Aquatic Plants. A TMDL has not been prepared or approved for this stream segment for PCBs. EPA has approved the Chesapeake Bay TMDL on 12/29/10 for this segment. The facility was not assigned an individual waste load allocation for Nitrogen, Phosphorus or TSS. The permit contains a TMDL reopener clause which will allow the it to be modified, in compliance with Section 303(d)(4) of the Act once a TMDL is approved.

26. **CHANGES TO PERMIT**: Use **TABLE III(a)** to record any changes from the previous permit and the rationale for those changes. Use **TABLE III(b)** to record any changes made to the permit during the permit processing period and the rationale for those changes [i.e., use for comments from the applicant, VDH, EPA, other agencies and/or the public where comments resulted in changes to the permit limitations or any other changes associated with the special conditions or reporting requirements].

SEE ATTACHMENT 11

27. **NPDES INDUSTRIAL PERMIT RATING WORKSHEET:**

N/A - This is a municipal facility.

28. **DEQ PLANNING COMMENTS RECEIVED ON DRAFT PERMIT**: Document any comments received from DEQ planning.

The discharge is not addressed in any planning document but will be included when the plan is updated.

29. **PUBLIC PARTICIPATION:** Document comments/responses received during the public participation process. If comments/responses provided, especially if they result in changes to the permit, place in the attachment.

VDH/DSS COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from the Virginia Dept. of Health and the Div. of Shellfish Sanitation and noted how resolved.

The VDH reviewed the application and waived their right to comment and/or object on the adequacy of the draft permit. Letter received 1/10/12.

The DSS has no comments on the application/draft permit. Letter received 2/1/12.

EPA COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from the U.S. Environmental Protection Agency and noted how resolved.

EPA has no objections to the adequacy of the draft permit. Email received 3/14/12.

ADJACENT STATE COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from an adjacent state and noted how resolved.

Not Applicable.

OTHER AGENCY COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from any other agencies (e.g., VIMS, VMRC, DGIF, etc.) and noted how resolved.

The original draft permit was sent to VMRC and no comments were received.

OTHER COMMENTS RECEIVED FROM RIPARIAN OWNERS/CITIZENS ON DRAFT PERMIT: Document any comments received from other sources and note how resolved.

The application and draft permit have received public notice in accordance with the VPDES Permit Regulation, and no comments were received.

PUBLIC NOTICE INFORMATION: Comment Period: Start Date 3/8/12
End Date 3/9/12

Persons may comment in writing or by e-mail to the DEQ on the proposed reissuance of the permit within 30 days from the date of the first notice. Address all comments to the contact person listed below. Written or e-mail comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The Director of the DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requestor's interests would be directly and adversely affected by the proposed permit action.

All pertinent information is on file and may be inspected, and arrangements made for copying by contacting Deanna Austin at: Department of Environmental Quality (DEQ), Tidewater Regional Office, 5636 Southern Boulevard, Virginia Beach, VA 23462. Telephone: 757-518-2008 E-mail:deanna.austin@deq.virginia.gov

Following the comment period, the Board will make a determination regarding the proposed reissuance. This determination will become effective, unless the Director grants a public hearing. Due notice of any public hearing will be given.

30. **ADDITIONAL FACT SHEET COMMENTS/PERTINENT INFORMATION:**

Permit regulation 9 VAC 25-820-10 (General Virginia Pollutant Discharge Elimination System (VPDES) Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia) became effective November 1, 2006. The regulation governs facilities holding individual permits that discharge total nitrogen or total phosphorus to the Chesapeake Bay and its tributaries and replaces guidance document 05-2009. HRSD applied for coverage under the Watershed GP and is now covered under VPDES permit VAN040090 for the James River Aggregate Nutrient Discharge. The Ches-Liz plant nutrient outfall (same as outfall 001) is labeled outfall 507 under the Watershed GP.

ATTACHMENT 1

SITE INSPECTION REPORT/MEMORANDUM

Facility:	HRSD – Chesapeake/Elizabeth Plant
County/city:	Virginia Beach

VPDES NO.	VA0081264

DEPARTMENT OF ENVIRONMENTAL QUALITY
WASTEWATER FACILITY
INSPECTION REPORT
PART 1

Inspection date:	**May 13, 2010**	Date form completed:	**May 21, 2010**
Inspection by:	**Steven J.E. Long**	Inspection agency:	**DEQ/TRO**
Time spent:	**4 hours**	Announced Inspection:	[ ] Yes [√] No
Reviewed by: **Kenneth T. Raum**		Photographs taken at site?	[√] Yes [ ] No
Present at inspection:	**Jeffrey S. Layne, P.E.– Plant Manager, R.L. "Butch" Martin – Plant Supervisor Sharon Nicklas, Permits Manager Will Willis -DEQ**		

FACILITY TYPE:	FACILITY CLASS:
(**x**) Municipal	(**x**) Major
( ) Industrial	( ) Minor
( ) Federal	( ) Small
( ) VPA/NDC	( ) High Priority ( ) Low Priority

TYPE OF INSPECTION:

Routine	x	Reinspection		Compliance/assistance/complaint	

Date of previous inspection:	**November 30, 2006**	Agency:	**DEQ/TRO**

Population Served:	**~150 K**	Connections Served	**Varies**

Last Month Average Influent: April 2010	BOD 5 (mg/l)	**223**	TSS (mg/l)	**147**	Flow (MGD)	**15.73**	Total P (mg/l)	**5.2**
	Other: **pH 6.6-7.2**							
Last Month Average Effluent: April 2010	BOD 5 (mg/l)	**14**	TSS (mg/l)	**9.0**	Flow (MGD)	**15.73**	Total P (mg/l)	**1.03**
	Other:							
Last Quarter Average: Effluent	BOD 5 (mg/l)		TSS (mg/l)		Flow (MGD)		NH_3 (mg/l)	
	Other: **pH 6.9-7.2**							

Data verified in preface:	Updated?		NO CHANGES?	√

Has there been any new construction?	YES	√	NO	
If yes, were the plans and specifications approved?	YES	√	NO	

DEQ approval date:	**August 8, 2002. Construction finalized at this point.**

COPIES TO: (√) DEQ/TRO; (√) DEQ/OWPP; (√) OWNER; ( ) OPERATOR; ( ) EPA-Region III; ( ) Other:

FACILITY: HRSD - Chesapeake/Elizabeth Plant VA0081264

PLANT OPERATION AND MAINTENANCE																
1.	Class/number of licensed operators:	I	12	II	2	III	3	IV	2	Trainee						
2.	Hours per day plant manned?	24 hours/day, 7 days/week														
3.	Describe adequacy of staffing	GOOD	√	AVERAGE		POOR										
4.	Does the plant have an established program for training personnel	YES	√	NO												
5.	Describe the adequacy of training	GOOD	√	AVERAGE		POOR										
6.	Are preventative maintenance tasks scheduled	YES	√	NO												
7.	Describe the adequacy of maintenance	GOOD	√	AVERAGE		POOR										
8.	Does the plant experience any organic/hydraulic overloading?	YES		NO	√											
	If yes, identify cause/impact on plant															
9.	Any bypassing since last inspection?	YES		NO	√											
10.	Is the standby electrical generator operational?	YES	√	NO		NA										
11.	How often is the standby generator exercised?	1/month														
	Power transfer switch?	1/month		ALARM SYSTEM?		1/month										
12.	When was the cross connection last tested on the potable supply?	All units 2/11/09														
13.	Is the STP alarm system operational?	YES	√	NO		NA										
14.	Is sludge disposed in accordance with an approved SMP	YES	√	NO		NA										
15.	Is septage received by the facility?	YES	√	NO												
	Is septage loading controlled?	YES	√	NO		NA										
	Are records maintained?	YES	√	NO		NA										

OVERALL APPEARANCE OF FACILITY	GOOD	√	AVERAGE		POOR	

COMMENTS:	

PLANT RECORDS

	WHICH OF THE FOLLOWING RECORDS DOES THE PLANT MAINTAIN?							
	Operational logs for each process unit	YES	√	NO		NA		
	Instrument maintenance and calibration	YES	√	NO		NA		
	Mechanical equipment maintenance	YES	√	NO		NA		
1.	Industrial waste contribution (municipal facilities)	YES	√	NO		NA		

	WHAT DOES THE OPERATIONAL LOG CONTAIN					
	Visual Observations	√	Flow Measurement	√	Laboratory Results	√
2.	Process Adjustments	√	Control Calculations	√	Other?	

COMMENTS:

	WHAT DO THE MECHANICAL EQUIPMENT RECORDS CONTAIN?					NA	
	MFG. Instructions	√	As Built Plans/specs	x	Spare Parts Inventory		√
3.	Lube Schedules	√	Other?		Equipment/parts Suppliers		√

COMMENTS:

	WHAT DO INDUSTRIAL WASTE CONTRIBUTION RECORDS CONTAIN? (MUNICIPAL)			NA	
	Waste Characteristics	√	Impact on Plant		√
4.	Location and Discharge Types	√	Other?		

COMMENTS: **Industrial records maintained with Industrial Waste Division**

	WHICH OF THE FOLLOWING RECORDS ARE AT THE PLANT & AVAILABLE TO PERSONNEL?					NA	
	Equipment Maintenance Records	√	Industrial Contributor Records				
5.	Operational Log	√	Sampling/testing Records	√	Instrumentation Records		√

6.	Records not normally available to personnel at their location:	**Industrial records maintained with Industrial Waste Division**

7.	Were the records reviewed during the inspection	YES	x	NO	
8.	Are records adequate and the O&M manual current?	YES	x	NO	
9.	Are the records maintained for the required 3-year time period	YES	x	NO	

COMMENTS:

	SAMPLING								
1.	Are sampling locations capable of providing representative samples?					YES	√	NO	
2.	Do sample types correspond to VPDES permit requirements?					YES	√	NO	
3.	Do sampling frequencies correspond to VPDES permit requirements?					YES	√	NO	
4.	Does plant maintain required records of sampling?					YES	√	NO	
5.	Are composite samples collected in proportion to flow?	YES	√	NO		NA			
6.	Are composite samples refrigerated during collection?	YES	√	NO		NA			
7.	Does the plant run operational control tests?	YES	√	NO		NA			
COMMENTS:									

	TESTING									
	Who performs the testing?	Plant	√	Central Lab	√	Commercial Lab				
1.	Name: **Plant performs field analysis. HRSD Environmental Laboratory performs all other analyses.**									
	IF THE PLANT PERFORMS ANY TESTING, PLEASE COMPLETE QUESTIONS 2-4									
2.	Which total residual chlorine method is used?	**Hach Pocket Colorimeter**								
3.	Does plant appear to have sufficient equipment to perform required tests?					YES	√	NO		
4.	Does testing equipment appear to be clean and/or operable?					YES	√	NO		
COMMENTS:										

	FOR INDUSTRIAL FACILITIES WITH TECHNOLOGY BASED LIMITS ONLY						
1.	Is the production process as described in permit application? If no, describe changes in comments section.	YES		NO		NA	√
2.	Are products/production rates as described in the permit application? If no list differences in comments section.	YES		NO		NA	√
3.	Has the Agency been notified of the changes and their impact on plant effluent? Date agency notified:	YES		NO		NA	√
COMMENTS:							

	PROBLEMS IDENTIFIED AT LAST INSPECTION:	CORRECTED	NOT CORRECTED
	None noted.		

SUMMARY

	INSPECTION COMMENTS:
	No problems noted. Construction finished and plant looked good.

	COMPLIANCE RECOMMENDATIONS FOR ACTION
	None noted.

UNIT PROCESS:	Flow Measurement

INFLUENT		INTERMEDIATE		EFFLUENT	√

			YES	NO	NA
1.	Type of measuring device	**Venturi Meter**			
2.	Present reading?	**15.73 Average for April 2010**			
3.	Bypass channel			√	
4.	Bypass channel metered?				√
	Return flow discharged upstream of the meter?		√		
5.	Identify:	**Head works or aeration**			
6.	Device operating properly?		√		
7.	Date of last calibration?	**12/18/09**			
	EVIDENCE OF THE FOLLOWING PROBLEMS				
	Obstruction?			√	
8.	Grease?			√	

GENERAL CONDITION:	GOOD	√	FAIR		POOR	

COMMENTS:	

UNIT PROCESS:	SCREENINGS BAND SCREENS

			YES	NO	NA
1.	Number of manual units	0			
2.	Number of mechanical units	3			
3.	Number manual units in operation	0			
4.	Number of mechanical units in operation	2			
	Bypass channel provided		√		
5.	Bypass channel in use			√	
6.	Area adequately ventilated		√		
7.	Alarm system for equipment failure and/or overloads		√		
8.	Proper flow distribution between units		√		
9.	How often are units checked and cleaned	**Checked minimum each shift. Cleaned continuously**			
10.	Cycle of operation				
11.	Volume of screenings removed	**15 ft^3 4/2010**			

GENERAL CONDITION:	GOOD	√	FAIR		POOR	

COMMENTS:	**Band screens in use. Wastewater is pushed through band for removal of solids.**

UNIT PROCESS:	GRIT REMOVAL Vortex Grit Tanks

			YES	NO	NA
1.	Number of units	2			
2.	Number units in operation	1			
3.	Operation of grit collection equipment: Manual		Time Clock √	Continuous Duty	
4.	Area adequately ventilated		√		
5.	Proper flow distribution between units		√		
6.	Daily volume of grit removed	**See below**			
7.	All equipment operable		√		

GENERAL CONDITION:	GOOD	√	FAIR		POOR	

COMMENTS:	**Grit tank #2 in use 5/13/10.**

UNIT PROCESS:	GRIT REMOVAL CENTRIFUGAL CLASSIFIERS

			YES	NO	NA
1.	Number of units	4			
2.	Number units in operation	1			
3.	Operation of grit collection equipment: Manual		Time Clock √	Continuous Duty	
4.	Area adequately ventilated		√		
5.	Proper flow distribution between units		√		
6.	Daily volume of grit removed	**9 ft^3 4/2010**			
7.	All equipment operable		√		

GENERAL CONDITION:	GOOD	√	FAIR		POOR	

COMMENTS:	**Two classifiers for each Vortex Grit Tank. Grit pumps #3 and 4 in use 5/13/10.**

UNIT PROCESS:	**ACTIVATED SLUDGE**

			YES	NO	NA
1.	Number of aeration units	**12**			
2.	Number units in operation	**8**			
3.	Mode of operation:	**Plug Flow**			
4.	Proper flow distribution between units		√		
5.	Foam control operational		√		
6.	Scum control present			√	
7.	Dead spots			√	
8.	Excessive foam			√	
9.	Poor aeration			√	
10.	Excessive scum			√	
11.	Aeration equipment malfunction			√	
12.	Other problem(s):			√	
13.	Effluent control devices working properly (OXIDATION DITCHES)				√

14. *MIXED LIQUOR CHARACTERISTICS AS AVAILABLE:* ***4/2010***

pH (s.u.)		MLSS (mg/l)	**2881**	DO (mg/l)		SVI	**114**
Odor	**earthy**	Settleability (ml/l)		**336 (30 min.)**		SDI	
Color	**Dark-brown**						

15. *RETURN/WASTE SLUDGE RATES:*

Return Rate	**10.2 MGD**	Waste Rate	**0.674 MGD**	Waste Frequency	

16. *AERATION SYSTEM CONTROL:*

Time Clock		Manual Feed		Continuous Feed	√
Other:					

GENERAL CONDITION:	GOOD	√	FAIR		POOR	

COMMENTS:	**Tanks 1-4 and 9-12 are in use.**

UNIT PROCESS:	**SEDIMENTATION: UNITS 7-9**

	PRIMARY		SECONDARY	√	TERTIARY			YES	NO	NA
1.	Number of units				3					
2.	Number units in operation				3					
3.	Proper flow distribution between units							√		
4.	Sludge collection system working properly?							√		
5.	Signs of short circuiting and/or overloads								√	
6.	Effluent weirs level							√		
7.	Effluent weirs clean							√		
8.	Scum collection system working properly							√		
9.	Influent/effluent baffle system working properly							√		
10.	Chemical Used			√		Chemical Addition		√		
11.	Effluent characteristics				**Clear and colorless**					

GENERAL CONDITION:	GOOD		FAIR	x	POOR	

UNIT PROCESS:	**SEDIMENTATION: UNITS 1-3**

	PRIMARY		SECONDARY	√	TERTIARY			YES	NO	NA
1.	Number of units				3					
2.	Number units in operation				1					
3.	Proper flow distribution between units							√		
4.	Sludge collection system working properly?							√		
5.	Signs of short circuiting and/or overloads								√	
6.	Effluent weirs level							√		
7.	Effluent weirs clean							√		
8.	Scum collection system working properly							√		
9.	Influent/effluent baffle system working properly							√		
10.	Chemical Used			√		Chemical Addition		√		
11.	Effluent characteristics				**Clear and colorless**					

GENERAL CONDITION:	GOOD	√		FAIR		POOR

COMMENTS:	**Three older units and one of the new units are in use. Effluent weirs on the new units are covered for algae control. Effluent can be observed at the final discharge point of the units and was clear and colorless.**

UNIT PROCESS:	CHLORINATION

			YES	NO	NA
1.	Number of Hypochlorite Pumps?	4			
2.	Number of High Flow Pumps?	2			
3.	Number of Low Flow Pumps?	2			
4.	Number of Pumps in Operation?	1			
5.	Number Hypochlorite tanks? In use?	1			
6.	Number chlorine contact tanks in operation	3 of 4			
7.	Proper flow distribution between units?		√		
8.	*HOW IS CHLORINE INTRODUCED INTO THE WASTE STREAM?*				
	Perforated Diffuser		Injector w/single entry point	x	Tablet Feeder
9.	Chlorine residual in contact basin effluent (mg/l)	1.99 mg/L 5/13/10 @ 1255			
10.	Applied chlorine dosage (lbs/day)	629 average 4/2010			
11.	Contact basin adequately baffled?		√		
12.	Adequate ventilation in chlorine cylinder storage area?				√
14.	Adequate ventilation in chlorine equipment room?				√
15.	Proper safety precautions used?		√		

GENERAL CONDITION:	GOOD	√	FAIR		POOR	

COMMENTS:	**Hypochlorite in use.**

UNIT PROCESS:	DECHLORINATION

						YES	NO	NA
	Dechlorination chemical used?							
1.	Sulfur Dioxide		Bisulfite	√	Other:			
2.	Number of Bisulfite Pumps? In use?				2/1			
3.	Number High/Low Bisulfite Pumps?				1/1			
4.	Number of Bisulfite Tanks?				1			
5.	Number of mixing tanks				2			
6.	Number contact tanks				1			
7.	Number contact tanks in operation				1			
8.	Proper flow distribution between units?							√
9.	*HOW IS CHEMICAL INTRODUCED INTO THE WASTE STREAM?*							
	Perforated Diffuser		Injector w/single entry point		x	Tablet Feeder		
10.	Chlorine residual in basin effluent				0.02 mg/l 5/13/10 @ 1312			
11.	Applied dechlorination dosage				442 lbs/day average 4/2010			
12.	Control system operational?					√		
13.	Control system adjusted?	Automatic			Manual	x	Other:	
14.	Residual analyzer?					√		
15.	Contact basin adequately baffled?							√
16.	Adequate ventilation in cylinder storage area?							√
17.	Adequate ventilation in equipment room?							√
18.	Proper safety precautions used?					√		

GENERAL CONDITION:	GOOD	√	FAIR		POOR	

COMMENTS:	

FACILITY: HRSD - Chesapeake/Elizabeth Plant **VA0081264**

UNIT PROCESS: **GRAVITY THICKENER**

									YES	NO	NA
1.	Number of units					**2**					
2.	Number units in operation					**1**					
3.	Type of sludge treated:						Combination				
	Primary		Waste Activated		**x**		Other:				
4.	Sludge fed how?			Continuous	√		Intermittent				
5.	Solids concentration in the influent sludge										
	Solids concentration in the thickened sludge					**1.06% 4/2010**					
6.	Signs of short-circuiting and/or overloading?										√
7.	Effluent weirs level?										√
8.	Sludge collection system working properly?										√
9.	Influent/effluent baffle systems working properly?										√
10.	Chemical addition?									√	
	Chemical used?				Dosage?						

GENERAL CONDITION:	GOOD	√	FAIR		POOR	
COMMENTS:	Tanks are covered.					

UNIT PROCESS: **CENTRIFUGATION**

								YES	NO	NA
1.	Number of units				**3**					
2.	Number units in operation				**1**					
3.	**PURPOSE OF CENTRIFUGE**									
	Thickening		Dewatering	√	Other:					
4.	*OPERATION OF EQUIPMENT*									
	Manual	√	Automatic		Other:					
5.	Centrifuge run time			**23.2 hrs/day average 4/2010**						
6.	Volume of influent sludge flow: (gal/min)			**368, 4/2010**						
7.	Amount of cake produced: (lbs/day)			**32,900 average 4/2010**						
8.	*SLUDGE SOLIDS*									
	Influent (%)	**1.06**	Effluent (%)	**21.7**						
9.	Conditioning chemical fed:			**P275**						
10.	Conditioning chemical dose:			**1094 average lbs/day**						
11.	Centrate return location:			**Aeration**						
12.	Signs of centrate return problems?								√	

GENERAL CONDITION:	GOOD	√	FAIR		POOR	
COMMENTS:						

UNIT PROCESS: **INCINERATION**

									YES	NO	NA
1.	Method:	Multiple Hearth Furnace		√	Fluidized Bed Incinerator						
2.	Number of units			**2**							
3.	Number units in operation			**1**							
4.	*Types of sludge incinerated:*										
	Primary		Waste Activated	**x**	Other:						
5.	Loading rate (wet sludge)			**32,900 lbs/day average 4/2010**							
6.	Range of operating temperature			**1460° F Max Burning Zone**							
7.	Fuel used	Gas	Amounts	**86,000 ft³/day average 4/2010**							
8.	Amount of ash generated	**12 yd³**	Disposal of ash	**Landfill or beneficial use**							
9.	Average number of hours of operation per week; Daily operation			**23 hrs/day average 4/2010**							

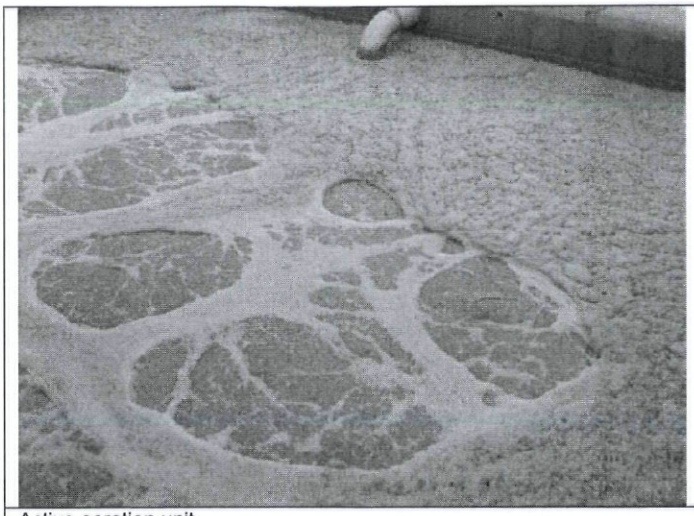
GENERAL CONDITION:	GOOD	**x**	FAIR		POOR	
COMMENTS:						

UNIT PROCESS:	EFFLUENT/PLANT OUTFALL

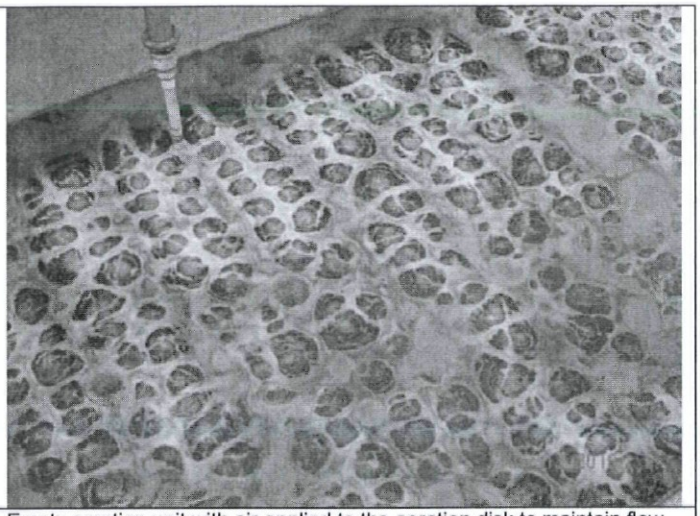
									YES	NO	NA
1.	Type of outfall		Shore Based			Submerged	√				
	TYPE IF SHORE BASED:										
2.	Wingwall		Headwall		Rip Rap		Pipe	√			
3.	Flapper valve present?									√	
4.	Erosion of bank area?										√
5.	Effluent plume visible?										√
6.	Condition of outfall and the supporting structure?										
	GOOD	na	FAIR		POOR						
	FINAL EFFLUENT, EVIDENCE OF FOLLOWING PROBLEMS?										
	Oil sheen?									√	
	Grease?									√	
	Sludge bar?									√	
	Turbid effluent?									√	
	Visible foam?									√	
7.	Unusual color?									√	

GENERAL CONDITION:	GOOD	√	FAIR		POOR	

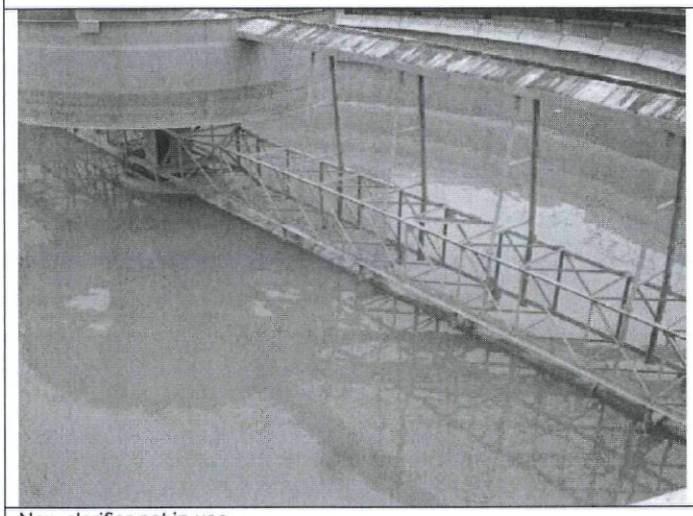
COMMENTS:	**Final effluent was clear and colorless. The actual outfall is not observable.**



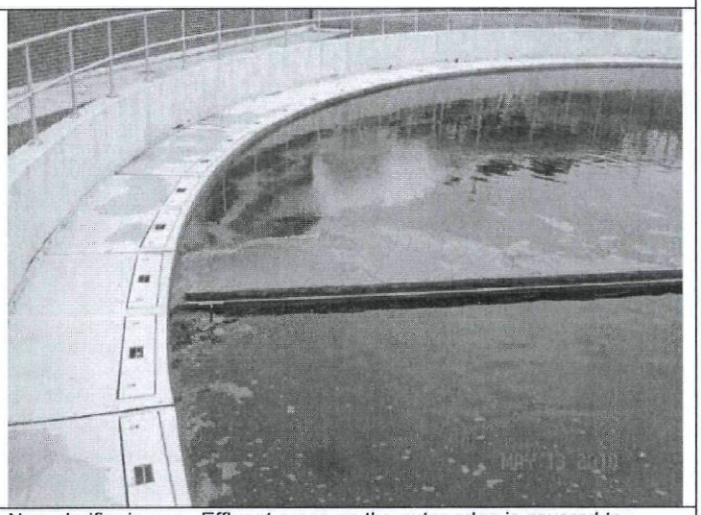
Active aeration unit.



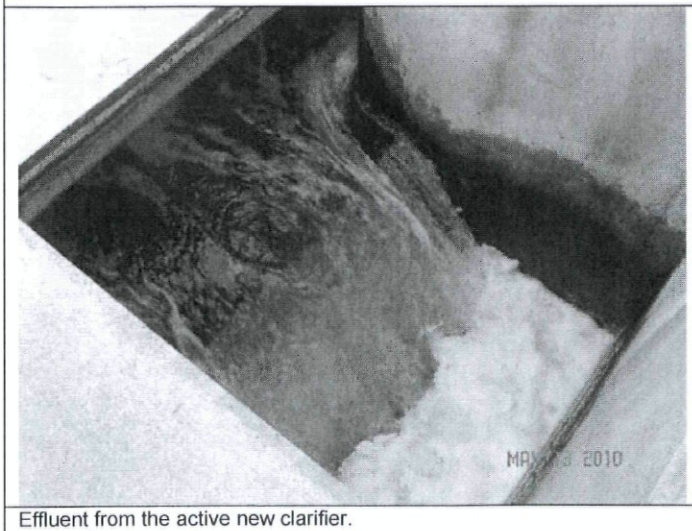
Empty aeration unit with air applied to the aeration disk to maintain flow through the disks.



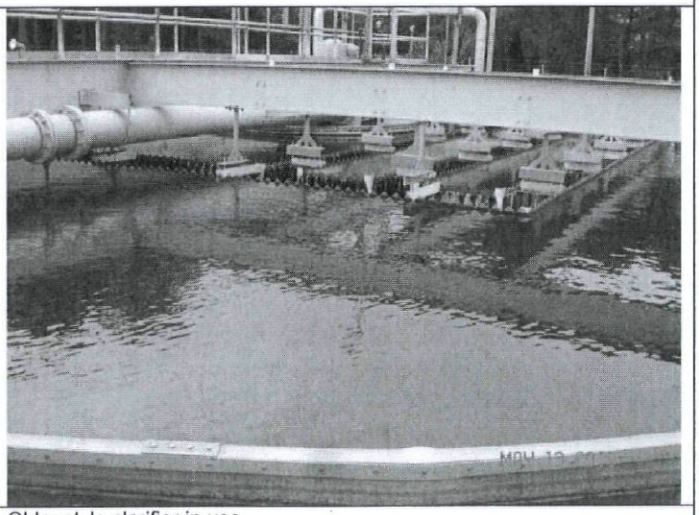
New clarifier not in use.



New clarifier in use. Effluent areas on the outer edge is covered to eliminate algae growth.



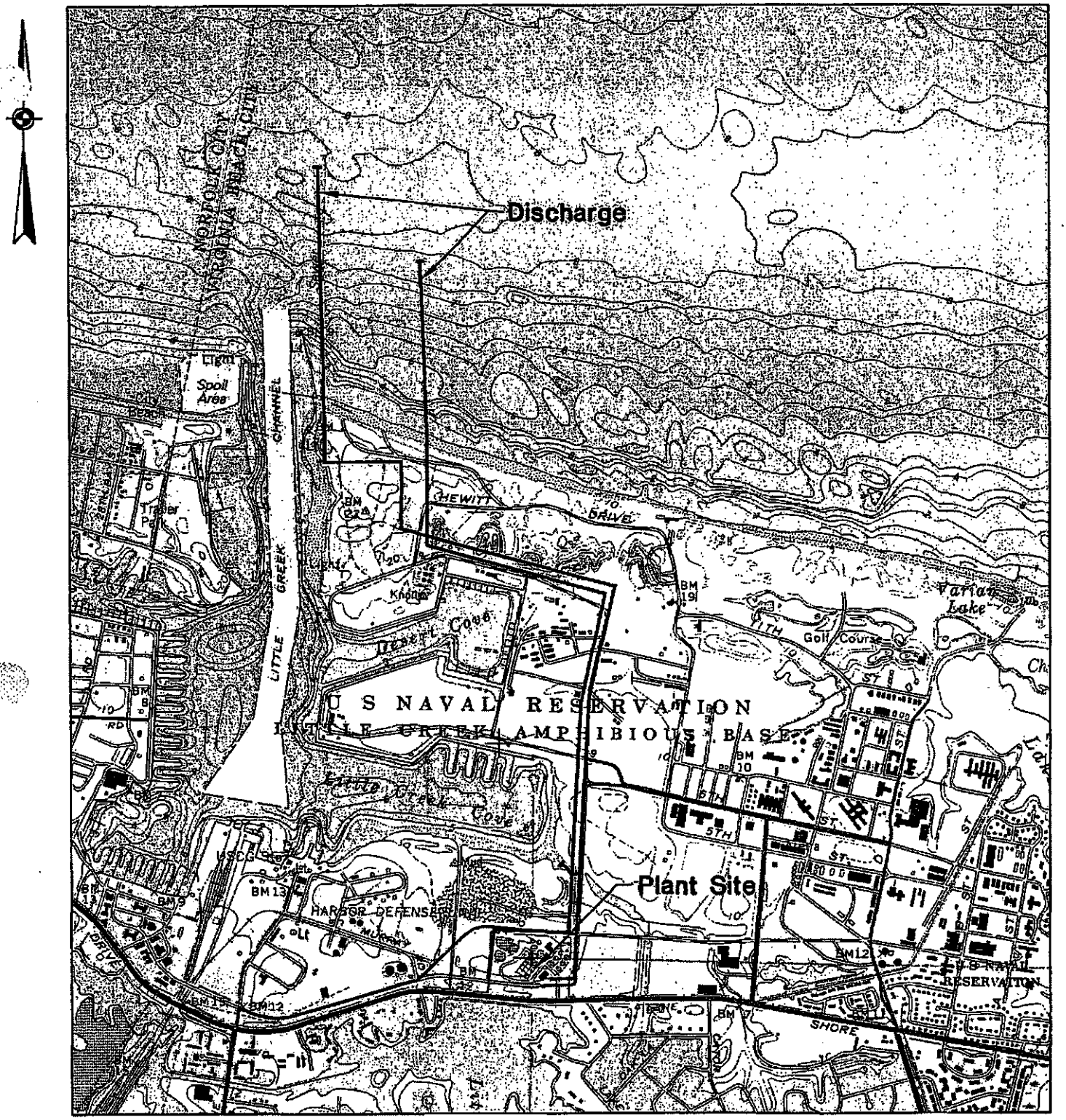
Effluent from the active new clarifier.



Older style clarifier in use.

ATTACHMENT 2

DISCHARGE LOCATION/TOPOGRAPHIC MAP

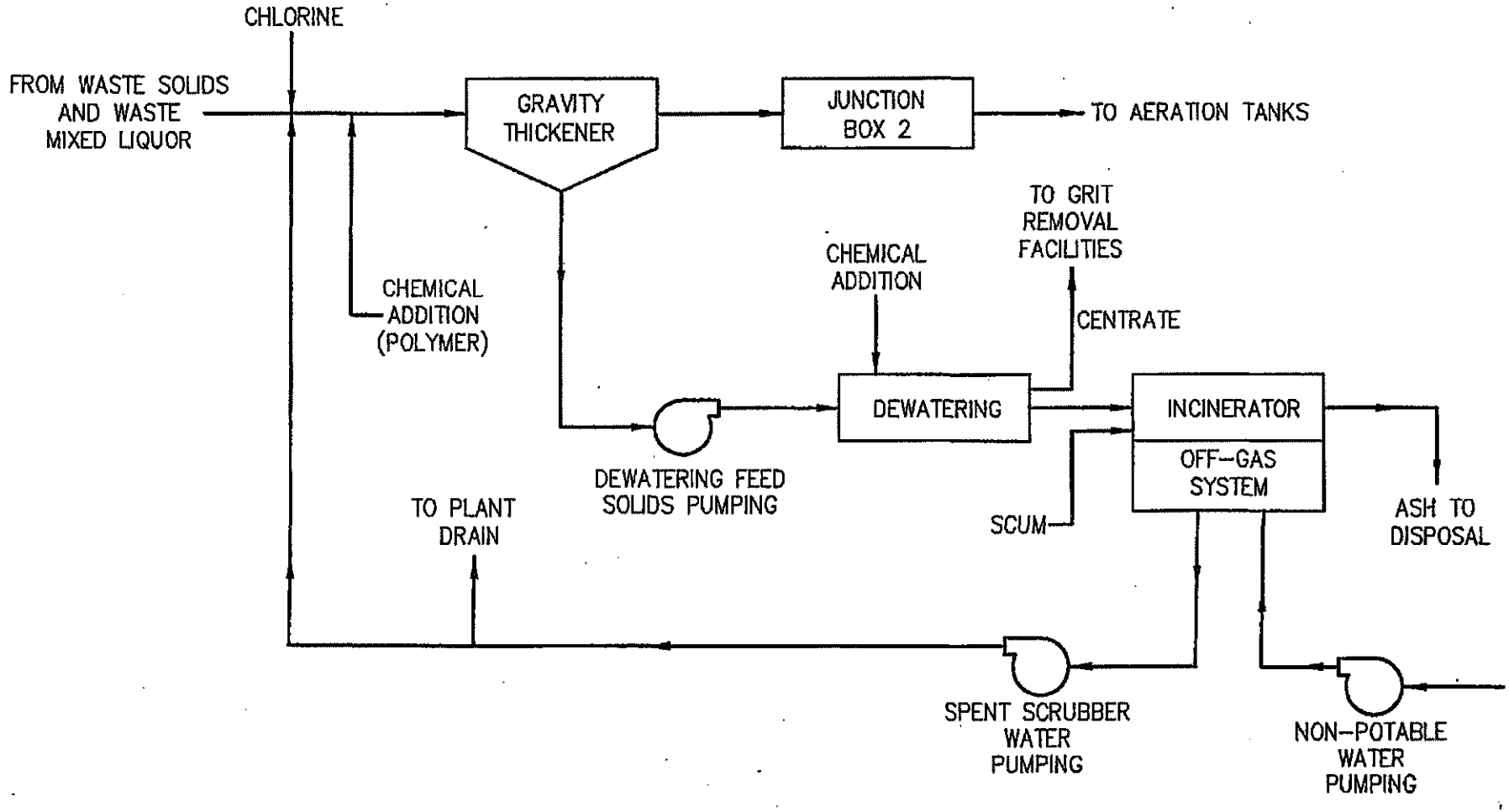


Location Map
for
Chesapeake - Elizabeth TP

June 2003 **Scale: 1"=2000'** **USGS Map Reference**

ATTACHMENT 3

SCHEMATIC/PLANS & SPECS/SITE MAP/ WATER BALANCE

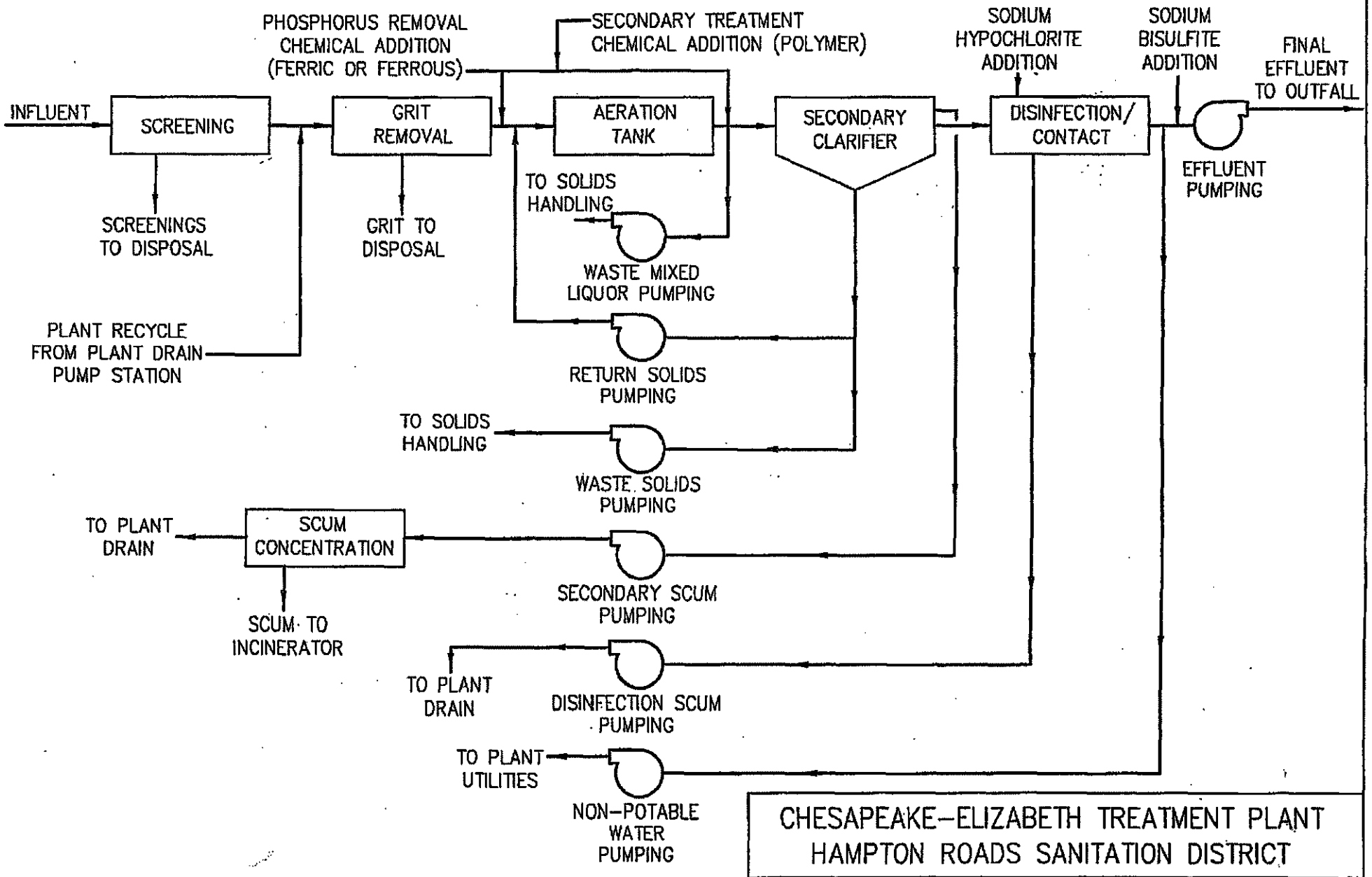


CHESAPEAKE-ELIZABETH TREATMENT PLANT
HAMPTON ROADS SANITATION DISTRICT

SOLIDS HANDLING FLOW DIAGRAM

HAZEN AND SAWYER
Environmental Engineers & Scientists

3/31/07

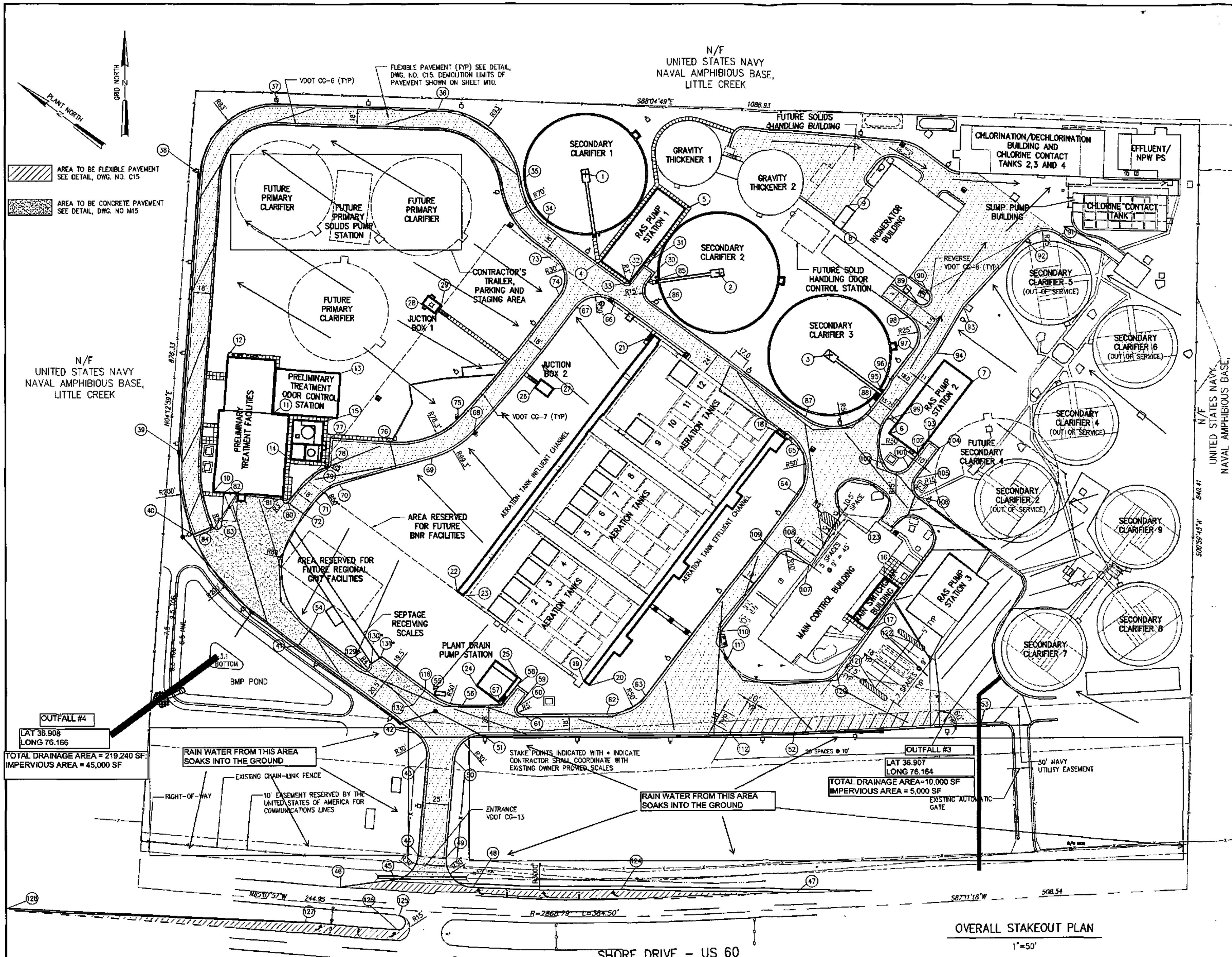


CHESAPEAKE-ELIZABETH TREATMENT PLANT
HAMPTON ROADS SANITATION DISTRICT

SEWAGE TREATMENT FLOW DIAGRAM

HAZEN AND SAWYER
Environmental Engineers & Scientists

11/21/07



COORDINATE TABLE

NO.	NORTHING	EASTING
1	N 3498944.99	E 12165570.97
2	N 3498836.75	E 12165714.79
3	N 3498746.56	E 12165834.64
4	N 3498849.46	E 12165587.31
5	N 3498906.71	E 12165679.21
6	N 3498660.80	E 12165897.87
7	N 3498718.06	E 12165989.77
8	N 3498883.79	E 12165847.29
9	N 3498910.38	E 12165853.53
10	N 3498595.64	E 12165166.55
11	N 3498681.87	E 12165232.40
12	N 3498745.01	E 12165182.90
13	N 3498726.58	E 12165307.14
14	N 3498631.49	E 12165251.58
15	N 3498673.70	E 12165268.78
16	N 3498503.55	E 12165893.62
17	N 3498444.57	E 12165875.53
18	N 3498663.60	E 12165776.08
19	N 3498388.41	E 12165568.56
20	N 3498383.60	E 12165574.95
21	N 3498768.92	E 12165644.45
22	N 3498486.66	E 12165432.04
23	N 3498481.75	E 12165438.56
24	N 3498383.40	E 12165452.15
25	N 3498392.86	E 12165498.07
26	N 3498710.88	E 12165515.57
27	N 3498709.64	E 12165515.77
28	N 3498802.38	E 12165394.19
29	N 3498801.14	E 12165415.78
30	N 3498836.97	E 12165645.49
31	N 3498836.97	E 12165645.49
32	N 3498826.31	E 12165618.07
33	N 3498825.32	E 12165613.57
34	N 3498550.05	E 12165147.32
35	N 3498936.07	E 12165501.53
36	N 3499016.02	E 12165412.56
37	N 3499021.85	E 12165238.74
38	N 3498944.99	E 12165153.18
39	N 3498639.47	E 12165130.68
40	N 3498549.10	E 12165145.01
41	N 3498427.31	E 12165259.92
42	N 3498331.57	E 12165387.15
43	N 3498305.04	E 12165399.00
44	N 3498198.06	E 12165389.83
45	N 3498170.93	E 12165364.19
46	N 3498162.51	E 12165305.43
47	N 3498157.08	E 12165798.51
48	N 3498162.96	E 12165448.51
49	N 3498195.50	E 12165419.72
50	N 3498301.94	E 12165428.84
51	N 3498329.37	E 12165458.71
52	N 3498329.59	E 12165796.29
53	N 3498340.64	E 12165997.71
54	N 3498445.69	E 12165273.75
55	N 3498372.37	E 12165407.76
56	N 3498362.33	E 12165437.86
57	N 3498362.35	E 12165480.12
58	N 3498384.33	E 12165496.65
59	N 3498375.31	E 12165508.64
60	N 3498360.41	E 12165497.43
61	N 3498352.40	E 12165501.43
62	N 3498352.46	E 12165593.87
63	N 3498372.40	E 12165635.04
64	N 3498592.91	E 12165800.99
65	N 3498662.93	E 12165791.11

COORDINATE TABLE

NO.	NORTHING	EASTING
66	N 3498804.44	E 12165603.07
67	N 3498798.51	E 12165561.06
68	N 3498661.38	E 12165450.13
69	N 3498633.48	E 12165405.08
70	N 3498604.34	E 12165305.45
71	N 3498586.41	E 12165279.53
72	N 3498570.68	E 12165267.69
73	N 3498854.35	E 12165536.75
74	N 3498812.34	E 12165542.68
75	N 3498676.99	E 12165433.24
76	N 3498650.77	E 12165359.66
77	N 3498655.50	E 12165295.46
78	N 3498628.24	E 12165293.46
79	N 3498623.31	E 12165290.41
80	N 3498545.91	E 12165253.60
81	N 3498589.90	E 12165244.51
82	N 3498594.76	E 12165178.52
83	N 3498559.33	E 12165175.91
84	N 3498557.81	E 12165166.30
85	N 3498826.18	E 12165637.37
86	N 3498805.17	E 12165640.34
87	N 3498678.30	E 12165808.93
88	N 3498688.19	E 12165878.95
89	N 3498803.15	E 12165930.32
90	N 3498815.87	E 12165939.89
91	N 3498815.87	E 12165939.89
92	N 3498872.98	E 12166046.80
93	N 3498798.79	E 12165979.50
94	N 3498748.92	E 12165950.42
95	N 3498705.38	E 12165891.87
96	N 3498719.93	E 12165899.92
97	N 3498752.98	E 12165924.72
98	N 3498787.98	E 12165919.72
99	N 3498675.71	E 12165895.52
100	N 3498627.13	E 12165893.22
101	N 3498624.02	E 12165919.00
102	N 3498624.02	E 12165919.00
103	N 3498653.33	E 12165941.06
104	N 3498644.31	E 12165953.05
105	N 3498611.29	E 12165928.19
106	N 3498590.28	E 12165931.16
107	N 3498515.74	E 12165812.07
108	N 3498529.72	E 12165793.49
109	N 3498527.15	E 12165780.29
110	N 3498442.84	E 12165716.84
111	N 3498412.32	E 12165724.04
112	N 3498332.00	E 12165656.57
113		
114		
115		
116	N 3498332.04	E 12165725.85
117		
118		
119		
120	N 3498396.72	E 12165842.23
121	N 3498381.30	E 12165883.18
122	N 3498431.63	E 12165921.07
123	N 3498569.28	E 12165852.36
124	N 3498160.53	E 12165608.51
125	N 3498131.97	E 12165369.11
126	N 3498116.08	E 12165367.19
127	N 3498124.42	E 12165267.54
128	N 3498139.72	E 12164942.66
129	N 3498402.18	E 12165331.57
130	N 3498407.64	E 12165339.54
131	N 3498413.67	E 12165348.73
132	N 3498362.29	E 12165384.57

NO.	ISSUED FOR	DATE	BY
5	RECORD DRAWING	05/08	
4	RFP 61	8/07	ALS
3	RFP 60	7/07	ALS
2	CONSTRUCTION	10/03	MGH
1	REGULATORY APPROVAL	10/03	MGH

DESIGNED MGH
DRAWN CAB
CHECKED TJL
PROJ. ENGR. JBE
APPROVED

THIS DOCUMENT ORIGINALLY ISSUED FOR CONSTRUCTION AND SEALED BY JAMES B. EWING, JR., SEAL NO. 031109

THIS DOCUMENT ORIGINALLY ISSUED FOR CONSTRUCTION AND SEALED BY ALAN L. STONE, SEAL NO. 24446

RECORD DRAWING

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HAZEN AND SAWYER
Environmental Engineers & Scientists
4011 WestChase Blvd, Raleigh, North Carolina 27607

HAMPTON ROADS SANITATION DISTRICT
VIRGINIA BEACH, VIRGINIA

CHESAPEAKE-ELIZABETH TREATMENT PLANT IMPROVEMENTS - PHASE 1

OVERALL SITE PLAN
CIVIL
OVERALL STAKEOUT PLAN

THE SCALE BAR SHOWN BELOW MEASURES ONE INCH LONG ON THE ORIGINAL DRAWING.

DATE MAY 2008
H & S JOB NUMBER 30653
CONTRACT NUMBER
DRAWING NUMBER C10
SHEET 4 OF 306

RECORD DRAWING

01/16/08 10:58am FILE= H:\30653\CIVIL\C010 by DAMOS XREFs=30653-TB, 000\SP-CD, sp-e1, 000\sp-e1-pb, sp-tp,

ATTACHMENT 4

TABLE I - DISCHARGE/OUTFALL DESCRIPTION

TABLE I

NUMBER AND DESCRIPTION OF OUTFALLS

OUTFALL NO.	DISCHARGE LOCATION	DISCHARGE SOURCE (1)	TREATMENT (2)	FLOW (3)
001 Primary	36°56′ 09″N 076°61′ 00″W 7 CHE007.47	POTW	Secondary treatment provided by bar screen, grit removal, activitated sludge, secondary clarification, chlorination, and dechlorination. Odor control for the headworks.	24 MGD
001* Alternate	36°56′ 18″N 076°61′ 032″W 7 CHE007.89	POTW	Same as above	Same as above
002	36°54′ 43″N 076°60′ 94.5″W 7 LTC000.67	POTW	Same treatment provided. Short emergency bypass outfall.	Same as above
003	36°54′ 29″N 076°60′ 94.9″W	Stormwater	No treatment provided Good housekeeping practices used.	0.0001 MG
004**	36°54′ 28″N 076°60′ 95.8″W	Stormwater	No treatment provided Good housekeeping practices used.	0.011 MG

* The 001 alternate discharge is a completely separate valved pipeline to the Chesapeake Bay. During normal operations, flow is routed through the newest pipeline, however valves allow flow from one pipe to the other or from both. The older discharge pipe has a "Y" shaped diffuser (see diagram on next page in this section).

**Outfalls 004 and 005 were combined to make one outfall during construction activity. This was done at the 2007 reissuance.

(1) List operations contributing to flow
(2) Give brief description, unit by unit
(3) Give maximum 30-day average flow for industry and design flow for municipal

ATTACHMENT 5

TABLE II - EFFLUENT MONITORING/LIMITATIONS

TABLE II - MUNICIPAL EFFLUENT LIMITATIONS/MONITORING

OUTFALL # 001 and 002[i] DESIGN FLOW: 24 MGD
Outfall Description: Treated Municipal wastewater.
SIC CODE: 4952

(X) Final Limits ( ) Interim Limits Effective Dates - From: Reissuance Date To: Expiration Date

PARAMETER & UNITS	BASIS FOR LIMITS	DESIGN FLOW MULTIPLIER	EFFLUENT LIMITATIONS				MONITORING REQUIREMENTS	
			MONTHLY AVERAGE	WEEKLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow (MGD) [a]	3		NL	NA	NA	NL	Continuous	TI & RE*
pH (S.U.)	1		NA	NA	6.0	9.0	1/Day	Grab
BOD5 (mg/l) [c] [d]	1	24	30	45	NA	NA	3/Week	24-Hr. Comp
BOD5 (kg/d) [d]	1	24	2725	4088	NA	NA	3/Week	24-Hr. Comp
TSS (mg/l) [c] [d]	1	24	30	45	NA	NA	3/Week	24-Hr. Comp
TSS (kg/d) [d]	1	24	2725	4088	NA	NA	3/Week	24-Hr. Comp
TRC (mg/l) [b] [c]	2		0.20	2.4	NA	NA	1/Day	Grab
Total Phosphorus (mg/l)	3		NL	NA	NA	NA	1/Month	24-Hr. Comp
Total Phosphorus (mg/l) Year to date [f]	3		NL	NA	NA	NA	1/Month	Calc
Total Phosphorus (mg/l) Calendar Year [e] [f]	3		2.0	NA	NA	NA	1/Year	Calc
Enterococci (n/cml) [d] [h]	3		35	NA	NA	NA	2/Month (Between 10 am & 4 pm)	Grab

PARAMETER & UNITS	BASIS FOR LIMITS	DESIGN FLOW MULTIPLIER	EFFLUENT LIMITATIONS				MONITORING REQUIREMENTS	
			MONTHLY AVERAGE	WEEKLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Fecal Coliform (n/cml) [d] [g]	2		200	NA	NA	NA	1/Week (Between 10 am & 4 pm)	Grab

*Totalizing, Indicating & Recording Equipment

NA = NOT APPLICABLE; NL = NO LIMIT, MONITORING REQUIREMENT ONLY

1/Year = January 1 to December 31

Upon issuance of the permit, Discharge Monitoring Reports (DMRs) shall be submitted to the regional office at the frequency required by the permit regardless of whether an actual discharge occurs. In the event that there is no discharge for the monitoring period, then "no discharge" shall be reported on the DMR.

In addition to any Total Nitrogen or Total Phosphorus concentration limits listed above, this facility has Total Nitrogen and Total Phosphorus calendar year load limits associated with this outfall included in the current Registration List under registration number VAN040090, enforceable under the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Watershed in Virginia.

[a] The design flow of this treatment facility is 24 MGD. See Part I.C.5 for additional flow requirements.
[b] See Part I.B. for additional chlorine monitoring instructions.
[c] See Parts I.C.7 and I.C.8 for quantification levels and reporting requirements, respectively.
[d] See Part I.C.9 for additional instructions regarding effluent monitoring frequencies.
[e] Annual average limitation, based on a calculation of all samples collected during the calendar year.
[f] See Part I.C.12.for additional instructions regarding Total Phosphorus
[g] Fecal Coliform monthly average is calculated as a geometric mean.
[h] Enterococci monthly average is calculated as a geometric mean. Samples must be taken at least 7 days apart.
[i] Monitoring for outfall 001 represents outfall 002. There is no Part 1.A. reporting for 002. See Part I.C.6. for additional requirements for outfall 002.

The basis for the limitations codes are:
1. Technology (e.g., Federal Effluent Guidelines)
2. Water Quality Standards (9 VAC 25-260 et. seq.)
3. Best Professional Judgment

TABLE II – MUNICIPAL EFFLUENT LIMITATIONS/MONITORING

OUTFALL # 003 and 004
Outfall Description: Outfalls Discharging Storm Water that IS Associated with a Regulated Industrial Activity-No Chemical Parameter Monitoring Required

SIC CODE: 4952

(X) Final Limits ( ) Interim Limits Effective Dates - From: Reissuance To: Expiration

PARAMETER & UNITS	BASIS FOR LIMITS	MULTIPLIER OR PRODUCTION	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
			MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE

These outfalls shall contain only storm water runoff associated with a regulated activity. No process water shall be discharged from these outfalls.

No Chemical Parameter Monitoring shall be required for these outfalls.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

No exposure status has been given to these two outfalls.

TABLE II - MUNICIPAL MINOR EFFLUENT LIMITATIONS
Attachment 5 continued

Final Chlorine Limitations Effective Dates - From: Permit Issuance To: Permit Expiration

TRC **	AFTER CL2 CONTACT TANK (Dechlor. Required)			AFTER DECHLORINATION		AFTER CL2 CONTACT TANK (Dechlor. Not Required)				
	MIN.	EXC.	INST. MIN.	WKLY AVG.	INST. MAX.	PERMIT RANGE	EXC.	REPORT-ING RANGE	EXC.	TECH. MAX.
a) Non-Detect. Dechlor. Required	---	---	---	---	---	NA	NA	NA	NA	NA
b) Detect. Dechlor. Required	**1.5**	**36**	**0.6 mg/l***	**2.4 mg/l**	---	NA	NA	NA	NA	NA
c) No Dechlor.	NA	NA	NA	NA	NA	---	---	---	---	---

* Reporting is required when 3 or more consecutive readings are <0.6 mg/l or when the TRC is <0.1 mg/l.

** --Chlorine mass balance Cw (W for Tidal systems): check one

____a) $C_w < 0.1$ mg/l [dechlor. required, non-detectable format]

_X_b) 0.1 mg/l $\leq C_w <$ 2.0 mg/l (2.5 mg/l for PWS, Shellfish waters) [dechlor. required, detectable format]

___ c) $C_w > 2.0$ mg/l (2.5 mg/l for PWS, Shellfish waters) [dechlor. not required, include a restrictive technology max. value]

The design flow of this treatment facility is 24 MGD.

NA = NOT APPLICABLE; NL = NO LIMIT, MONITORING REQUIREMENT ONLY

See Part I.B. for additional TRC limitations.

ATTACHMENT 6

EFFLUENT LIMITATIONS/MONITORING RATIONALE/SUITABLE DATA/ ANTIDEGRADATION/ANTIBACKSLIDING

HRSD Chesapeake-Elizabeth STP
Rationale for Parameters, Limitations, and Sampling Requirements

Outfall 001/002

Flow: No limit, monitoring is required with continuous, totalizing, indicating or recording equipment. This is based on the VPDES Permit Manual and is standard for sanitary wastewater plants with discharges greater than 2 MGD. The design flow of 24 MGD is the baseline for the 95% design flow capacity notification.

pH: Minimum limit of 6.0 SU and Maximum of 9.0 SU. These limits are based on Federal Effluent Guidelines (40 CFR 133.102) and Water Quality Standards in 9 VAC 25-260-50, which limits pH to the range above for coastal waters of the State. Monitoring is a daily grab sample and is standard for sanitary WW plants with discharges greater than 2 MGD.

Biological Oxygen Demand: Monthly average of 30 mg/L and 2725 kg/day. Weekly average of 45 mg/L and 4088 kg/day. This is based on Federal Effluent Guidelines (40 CFR 133.102 which sets the limits for secondary WW plants. Loading limits are in whole numbers based upon the latest DEQ significant figures guidance (06-2016). Monitoring is required using 24 hour composite samples at a frequency of 3/week. The frequency has been reduced from 4/week to 3/week based upon the data received during the permit term and the request from the facility. DEQ guidance document 98-2005 was used to decrease the monitoring frequency.

Total Suspended Solids: Monthly average of 30 mg/L and 2725 kg/day. Weekly average of 45 mg/L and 4088 kg/day. This is based on Federal Effluent Guidelines (40 CFR 133.102 which sets the limits for secondary WW plants. Loading limits are in whole numbers based upon the latest DEQ significant figures guidance (06-2016). Monitoring is required using 24 hour composite samples at a frequency of 3/week. The frequency has been reduced from 4/week to 3/week based upon the data received during the permit term and the request from the facility. DEQ guidance document 98-2005 was used to decrease the monitoring frequency.

Total Residual Chlorine The minimum limit after contact time is 1.5 mg/l with 36 exceptions. A permit special condition requires reporting when 3 or more consecutive TRC readings are below 0.6 mg/l or the TRC is less than 0.1 mg/l.
Monitoring is required once/2 hours by grab sample. This is based on the VPDES permit manual and is standard for municipal discharges of >2.0 MGD.

Final Total Residual Chlorine A weekly average of 2.4 mg/l. A monthly average of 0.20 mg/l. This is a technology based limit following guidance document 00-2011 and is carried forward from the current permit. The monthly average limit has been changed from 0.2 to 0.20 mg/l to account for significant figures guidance (06-2016). Monitoring is

required once/day by grab sample. The frequency is based on the VPDES permit manual and is standard for municipal discharges of >2.0 MGD.

Total Phosphorus Calendar Year

An annual average concentration limit of 2.0 mg/l is placed in the permit with monitoring on an annual basis. Total Phosphorus is the only nutrient parameter in this individual permit. All other nutrient monitoring and reporting is covered under the General VPDES Watershed Permit for Total Nitrogen and Total Phosphorus. The Chesapeake-Elizabeth HRSD facility is covered under VAN040090. On 5/16/07 guidance document 07-2008 was released by DEQ Central Office for the implementation of the nutrient general permit in relation to the individual permit. The guidance states (pg 17) that the annual concentration limit be included at the next permit reissuance/modification after the effective dated of the Watershed general permit total phosphorus limit. HRSD chose to accept the Total Phosphorus limit for the James River bubble permit on January 1, 2007; therefore the concentration average limit was changed from monthly to annual. This is carried forward in this reissuance.

Total Phosphorus Year-to-Date

There is no limit for the monthly average TP Year-to-date parameter. This parameter was added to the permit in accordance with guidance document 07-2008. Reporting is 1/M and is a calculation. Data for this parameter is collected in accordance with the VPDES permit VAN040090 for the James River Watershed held by HRSD.

Total Phosphorus

There is no limit for the monthly average phosphorus parameter. This parameter was added to the permit in accordance with guidance document 07-2008. Reporting is 1/M. Data for this parameter is collected in accordance with the VPDES permit VAN040090 for the James River Watershed. Reporting for this parameter is required in the individual permit (IP) because the annual concentration limits is contained in the IP. All data used to calculate and determine compliance with the limit in the IP needs to be in the same document and reported on the same form as the limit.

Fecal Coliform:

Monthly average of 200 n/cml. This is based on Water Quality Standards (9 VAC 25-260-160) and is believed protective of instream standards. Monitoring required is a grab sample once a week. The VPDES Manual allows reduction to this frequency based on long term average discharge values in relation to the monthly average limit. Current guidance requires fecal coliform monitoring in salt or transition waters if the discharge is to shellfish waters. BPJ determines that this frequency is adequate to determine compliance with the standard.

Enterococci:

This permit previously monitored the disinfection of treated wastewater through minimum TRC limits. The addition of an enterococci effluent limitation is intended to meet bacteriological standards and comply with EPA requirements. The last Chesapeake-Elizabeth permit reissuance was completed prior to Enterococci monitoring becoming an issue that EPA addressed in late 2007/early 2008 (see attached EPA letter).

A monthly average limit of 35 n/cml is included per water quality standards. Sampling is required 2/Month to be calculated as a geometric mean. Samples must be taken at least 7 days apart. This is consistent with the other HRSD facilities in TRO.

Stormwater

HRSD submitted stormwater data with the reissuance application. One outfall (004) was sampled, as HRSD has claimed representative monitoring for the other stormwater outfall (003). The data shows no reason for monitoring implementation at this time.

A no exposure certification was submitted with the application for the stormwater outfalls and is attached.

Water Quality Standards Reasonable Potential

Ammonia concentrations were also reported on Form 2A with a maximum of 27.4 mg/L. The data was not analyzed due to the large wasteload allocations for ammonia (WLAa 256, WLAc 360). No limit is needed for ammonia.

All other water quality parameters reported on Form 2A were below the quantification levels. No additional limits are needed at this time.

Mixing Zone Analysis

A dilution study was submitted for this facility in 7/98. The dilution study was approved by central office at the time of submittal. The acute dilution ratio is 115:1 and the chronic ratio is 1111:1. Results of the study showing the ratios are attached.

Outfall 001A

The Ches-Liz plant has two parallel pipes that make up outfall 001. Both pipes discharge to the same area. The flow to the pipes is controlled by valve. Both pipes can be open or just one. All flow goes to a "Y" juncture and then to 001 or 001A. This system has been in place for at least two permit cycles.

SALTWATER AND TRANSITION ZONES
WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: HRSD Ches-Liz
Receiving Stream: Chesapeake Bay

Permit No.: VA0081264

Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information

Mean Hardness (as CaCO3) =		mg/l
90th % Temperature (Annual) =	25.41	(° C)
90th % Temperature (Winter) =	0	(° C)
90th % Maximum pH =	8.29	
10th % Maximum pH =		
Tier Designation (1 or 2) =	1	
Early Life Stages Present Y/N =	N	
Tidal Zone =	1	(1 = saltwater, 2 = transition zone)
Mean Salinity =	23.96	(g/kg)

Mixing Information

Design Flow (MGD)	24
Acute WLA multiplier	115
Chronic WLA multiplier	1111
Human health WLA multiplier	1111

Effluent Information

Mean Hardness (as CaCO3) =	92.5	mg/L
90 % Temperature (Annual) =	28	(° C)
90 % Temperature (Winter) =		(° C)
90 % Maximum pH =	7.5	SU
10 % Maximum pH =	7.2	SU
Discharge Flow =		MGD

Parameter	Background	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
(ug/l unless noted)	Conc.	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH
Acenapthene	0	--	--	9.9E+02	--	--	1.1E+06	--	--	--	--	--	--	--	--	1.1E+06
Acrolein		--	--	9.3E+00	--	--	1.0E+04	--	--	--	--	--	--	--	--	1.0E+04
Acrylonitrile[C]		--	--	2.5E+00	--	--	2.8E+03	--	--	--	--	--	--	--	--	2.8E+03
Aldrin [C]	0	1.3E+00	--	5.0E-04	1.5E+02	--	5.6E-01	--	--	--	--	--	--	1.5E+02	--	5.6E-01
Ammonia-N (mg/l) - Annual	0	2.23E+00	3.24E-01	--	2.56E+02	3.60E+02	--	--	--	--	--	--	--	2.56E+02	3.60E+02	--
Ammonia-N (mg/l) - Winter	0	1.38E+01	1.99E+00	--	1.58E+03	2.22E+03	--	--	--	--	--	--	--	1.58E+03	2.22E+03	--
Anthracene	0	--	--	4.0E+04	--	--	4.4E+07	--	--	--	--	--	--	--	--	4.4E+07
Antimony	0	--	--	6.4E+02	--	--	7.1E+05	--	--	--	--	--	--	--	--	7.1E+05
Arsenic	0	6.9E+01	3.6E+01	--	7.9E+03	4.0E+04	--	--	--	--	--	--	--	7.9E+03	4.0E+04	--
Benzene [C]	0	--	--	5.1E+02	--	--	5.7E+05	--	--	--	--	--	--	--	--	5.7E+05
Benzidine[C]		--	--	2.0E-03	--	--	2.2E+00	--	--	--	--	--	--	--	--	2.2E+00
Benzo (a) anthracene [C]	0	--	--	1.8E-01	--	--	2.0E+02	--	--	--	--	--	--	--	--	2.0E+02
Benzo (b) fluoranthene [C]	0	--	--	1.8E-01	--	--	2.0E+02	--	--	--	--	--	--	--	--	2.0E+02
Benzo (k) fluoranthene [C]	0	--	--	1.8E-01	--	--	2.0E+02	--	--	--	--	--	--	--	--	2.0E+02
Benzo (a) pyrene [C]	0	--	--	1.8E-01	--	--	2.0E+02	--	--	--	--	--	--	--	--	2.0E+02
Bis2-Chloroethyl Ether[C]	0	--	--	5.3E+00	--	--	5.9E+03	--	--	--	--	--	--	--	--	5.9E+03
Bis2-Chloroisopropyl Ether	0	--	--	6.5E+04	--	--	7.2E+07	--	--	--	--	--	--	--	--	7.2E+07
Bis2-Ethylhexyl Phthalate[C]	0	--	--	2.2E+01	--	--	2.4E+04	--	--	--	--	--	--	--	--	2.4E+04
Bromoform [C]	0	--	--	1.4E+03	--	--	1.6E+06	--	--	--	--	--	--	--	--	1.6E+06
Butylbenzylphthalate	0	--	--	1.9E+03	--	--	2.1E+06	--	--	--	--	--	--	--	--	2.1E+06
Cadmium	0	4.0E+01	8.8E+00	--	4.6E+03	9.8E+03	--	--	--	--	--	--	--	4.6E+03	9.8E+03	--
Carbon Tetrachloride [C]	0	--	--	1.6E+01	--	--	1.8E+04	--	--	--	--	--	--	--	--	1.8E+04
Chlordane [C]	0	9.0E-02	4.0E-03	8.1E-03	1.0E+01	4.4E+00	9.0E+00	--	--	--	--	--	--	1.0E+01	4.4E+00	9.0E+00

Parameter	Background	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			**Most Limiting Allocations**		
(ug/l unless noted)	Conc.	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	**Acute**	**Chronic**	**HH**
TRC	0			–			–	–	–	–	–	–	–	–	–	–
Chlorine Prod. Oxidant	0	1.3E+01	7.5E+00	–	1.5E+03	8.3E+03	–	–	–	–	–	–	–	**1.5E+03**	**8.3E+03**	–
Chlorobenzene		–	–	1.6E+03	–	–	1.8E+06	–	–	–	–	–	–	–	–	**1.8E+06**
Chlorodibromomethane[C]	0	–	–	1.3E+02	–	–	1.4E+05	–	–	–	–	–	–	–	–	**1.4E+05**
Chloroform	0	–	–	1.1E+04	–	–	1.2E+07	–	–	–	–	–	–	–	–	**1.2E+07**
2-Chloronaphthalene	0	–	–	1.6E+03	–	–	1.8E+06	–	–	–	–	–	–	–	–	**1.8E+06**
2-Chlorophenol	0	–	–	1.5E+02	–	–	1.7E+05	–	–	–	–	–	–	–	–	**1.7E+05**
Chlorpyrifos	0	1.1E-02	5.6E-03	–	1.3E+00	6.2E+00	–	–	–	–	–	–	–	**1.3E+00**	**6.2E+00**	–
Chromium III	0			–			–	–	–	–	–	–	–	–	–	–
Chromium VI	0	1.1E+03	5.0E+01	–	1.3E+05	5.6E+04	–	–	–	–	–	–	–	**1.3E+05**	**5.6E+04**	–
Chrysene[C]	0	–	–	1.8E-02	–	–	2.0E+01	–	–	–	–	–	–	–	–	**2.0E+01**
Copper	0	9.3E+00	6.0E+00	–	1.1E+03	6.7E+03	–	–	–	–	–	–	–	**1.1E+03**	**6.7E+03**	–
Cyanide, Free	0	1.0E+00	1.0E+00	1.6E+04	1.2E+02	1.1E+03	1.8E+07	–	–	–	–	–	–	**1.2E+02**	**1.1E+03**	**1.8E+07**
DDD[C]	0	–	–	3.1E-03	–	–	3.4E+00	–	–	–	–	–	–	–	–	**3.4E+00**
DDE[C]	0	–	–	2.2E-03	–	–	2.4E+00	–	–	–	–	–	–	–	–	**2.4E+00**
DDT[C]	0	1.3E-01	1.0E-03	2.2E-03	1.5E+01	1.1E+00	2.4E+00	–	–	–	–	–	–	**1.5E+01**	**1.1E+00**	**2.4E+00**
Demeton	0	–	1.0E-01	–	–	1.1E+02	–	–	–	–	–	–	–	–	**1.1E+02**	–
Diazinon	0	8.2E-01	8.2E-01	–	9.4E+01	9.1E+02	–	–	–	–	–	–	–	**9.4E+01**	**9.1E+02**	–
Dibenz(a,h)anthracene[C]	0	–	–	1.8E-01	–	–	2.0E+02	–	–	–	–	–	–	–	–	**2.0E+02**
1,2-Dichlorobenzene	0	–	–	1.3E+03	–	–	1.4E+06	–	–	–	–	–	–	–	–	**1.4E+06**
1,3-Dichlorobenzene	0	–	–	9.6E+02	–	–	1.1E+06	–	–	–	–	–	–	–	–	**1.1E+06**
1,4-Dichlorobenzene	0	–	–	1.9E+02	–	–	2.1E+05	–	–	–	–	–	–	–	–	**2.1E+05**
3,3-Dichlorobenzidine[C]	0	–	–	2.8E-01	–	–	3.1E+02	–	–	–	–	–	–	–	–	**3.1E+02**
Dichlorobromomethane[C]	0	–	–	1.7E+02	–	–	1.9E+05	–	–	–	–	–	–	–	–	**1.9E+05**
1,2-Dichloroethane[C]	0	–	–	3.7E+02	–	–	4.1E+05	–	–	–	–	–	–	–	–	**4.1E+05**
1,1-Dichloroethylene	0	–	–	7.1E+03	–	–	7.9E+06	–	–	–	–	–	–	–	–	**7.9E+06**
1,2-trans-dichloroethylene	0	–	–	1.0E+04	–	–	1.1E+07	–	–	–	–	–	–	–	–	**1.1E+07**
2,4-Dichlorophenol	0	–	–	2.9E+02	–	–	3.2E+05	–	–	–	–	–	–	–	–	**3.2E+05**
1,2-Dichloropropane[C]	0	–	–	1.5E+02	–	–	1.7E+05	–	–	–	–	–	–	–	–	**1.7E+05**
1,3-Dichloropropene[C]	0	–	–	2.1E+02	–	–	2.3E+05	–	–	–	–	–	–	–	–	**2.3E+05**
Dieldrin[C]	0	7.1E-01	1.9E-03	5.4E-04	8.2E+01	2.1E+00	6.0E-01	–	–	–	–	–	–	**8.2E+01**	**2.1E+00**	**6.0E-01**
Diethyl Phthalate	0	–	–	4.4E+04	–	–	4.9E+07	–	–	–	–	–	–	–	–	**4.9E+07**
2,4-Dimethylphenol	0	–	–	8.5E+02	–	–	9.4E+05	–	–	–	–	–	–	–	–	**9.4E+05**
Dimethyl Phthalate	0	–	–	1.1E+06	–	–	1.2E+09	–	–	–	–	–	–	–	–	**1.2E+09**
Di-n-Butyl Phthalate	0	–	–	4.5E+03	–	–	5.0E+06	–	–	–	–	–	–	–	–	**5.0E+06**
2,4 Dinitrophenol	0	–	–	5.3E+03	–	–	5.9E+06	–	–	–	–	–	–	–	–	**5.9E+06**
2-Methyl-4,6-Dinitrophenol	0	–	–	2.8E+02	–	–	3.1E+05	–	–	–	–	–	–	–	–	**3.1E+05**
2,4-Dinitrotoluene[C]	0	–	–	3.4E+01	–	–	3.8E+04	–	–	–	–	–	–	–	–	**3.8E+04**
Dioxin 2,3,7,8-tetrachlorodibenzo-p-dioxin	0	–	–	5.1E-08	–	–	5.7E-05	–	–	–	–	–	–	–	–	**5.7E-05**
1,2-Diphenylhydrazine[C]	0	–	–	2.0E+00	–	–	2.2E+03	–	–	–	–	–	–	–	–	**2.2E+03**
Alpha-Endosulfan	0	3.4E-02	8.7E-03	8.9E+01	3.9E+00	9.7E+00	9.9E+04	–	–	–	–	–	–	**3.9E+00**	**9.7E+00**	**9.9E+04**

Parameter	Background	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
(ug/l unless noted)	Conc.	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH
Beta-Endosulfan	0	3.4E-02	8.7E-03	8.9E+01	3.9E+00	9.7E+00	9.9E+04	--	--	--	--	--	--	3.9E+00	9.7E+00	9.9E+04
Alpha + Beta Endosulfan	0	3.4E-02	8.7E-03	--	3.9E+00	9.7E+00	--	--	--	--	--	--	--	3.9E+00	9.7E+00	--
Endosulfan Sulfate	0	--	--	8.9E+01	--	--	9.9E+04	--	--	--	--	--	--	--	--	9.9E+04
Endrin	0	3.7E-02	2.3E-03	6.0E-02	4.3E+00	2.6E+00	6.7E+01	--	--	--	--	--	--	4.3E+00	2.6E+00	6.7E+01
Endrin Aldehyde	0	--	--	3.0E-01	--	--	3.3E+02	--	--	--	--	--	--	--	--	3.3E+02
Ethylbenzene	0	--	--	2.1E+03	--	--	2.3E+06	--	--	--	--	--	--	--	--	2.3E+06
Fluoranthene	0	--	--	1.4E+02	--	--	1.6E+05	--	--	--	--	--	--	--	--	1.6E+05
Fluorene	0	--	--	5.3E+03	--	--	5.9E+06	--	--	--	--	--	--	--	--	5.9E+06
Guthion	0	--	1.0E-02	--	--	1.1E+01	--	--	--	--	--	--	--	--	1.1E+01	--
Heptachlor [C]	0	5.3E-02	3.6E-03	7.9E-04	6.1E+00	4.0E+00	8.8E-01	--	--	--	--	--	--	6.1E+00	4.0E+00	8.8E-01
Heptachlor Epoxide[C]	0	5.3E-02	3.6E-03	3.9E-04	6.1E+00	4.0E+00	4.3E-01	--	--	--	--	--	--	6.1E+00	4.0E+00	4.3E-01
Hexachlorobenzene[C]	0	--	--	2.9E-03	--	--	3.2E+00	--	--	--	--	--	--	--	--	3.2E+00
Hexachlorobutadiene[C]	0	--	--	1.8E+02	--	--	2.0E+05	--	--	--	--	--	--	--	--	2.0E+05
Hexachlorocyclohexane Alpha-BHC[C]	0	--	--	4.9E-02	--	--	5.4E+01	--	--	--	--	--	--	--	--	5.4E+01
Hexachlorocyclohexane Beta-BHC[C]	0	--	--	1.7E-01	--	--	1.9E+02	--	--	--	--	--	--	--	--	1.9E+02
Hexachlorocyclohexane Gamma-BHC[C] (Lindane)	0	1.6E-01	--	1.8E+00	1.8E+01	--	2.0E+03	--	--	--	--	--	--	1.8E+01	--	2.0E+03
Hexachlorocyclopentadiene	0	--	--	1.1E+03	--	--	1.2E+06	--	--	--	--	--	--	--	--	1.2E+06
Hexachloroethane[C]	0	--	--	3.3E+01	--	--	3.7E+04	--	--	--	--	--	--	--	--	3.7E+04
Hydrogen Sulfide	0	--	2.0E+00	--	--	2.2E+03	--	--	--	--	--	--	--	--	2.2E+03	--
Indeno (1,2,3-cd) pyrene C	0	--	--	1.8E-01	--	--	2.0E+02	--	--	--	--	--	--	--	--	2.0E+02
Isophorone[C]	0	--	--	9.6E+03	--	--	1.1E+07	--	--	--	--	--	--	--	--	1.1E+07
Kepone	0	--	0.0E+00	--	--	0.0E+00	--	--	--	--	--	--	--	--	0.0E+00	--
Lead	0	2.4E+02	9.3E+00	--	2.8E+04	1.0E+04	--	--	--	--	--	--	--	2.8E+04	1.0E+04	--
Malathion	0	--	1.0E-01	--	--	1.1E+02	--	--	--	--	--	--	--	--	1.1E+02	--
Mercury	0	1.8E+00	9.4E-01	--	2.1E+02	1.0E+03	--	--	--	--	--	--	--	2.1E+02	1.0E+03	--
Methyl Bromide	0	--	--	1.5E+03	--	--	1.7E+06	--	--	--	--	--	--	--	--	1.7E+06
Methylene Chloride [C]	0	--	--	5.9E+03	--	--	6.6E+06	--	--	--	--	--	--	--	--	6.6E+06
Methoxychlor	0	--	3.0E-02	--	--	3.3E+01	--	--	--	--	--	--	--	--	3.3E+01	--
Mirex	0	--	0.0E+00	--	--	0.0E+00	--	--	--	--	--	--	--	--	0.0E+00	--
Nickel	0	7.4E+01	8.2E+00	4.6E+03	8.5E+03	9.1E+03	5.1E+06	--	--	--	--	--	--	8.5E+03	9.1E+03	5.1E+06
Nitrobenzene	0	--	--	6.9E+02	--	--	7.7E+05	--	--	--	--	--	--	--	--	7.7E+05
N-Nitrosodimethylamine[C]	0	--	--	3.0E+01	--	--	3.3E+04	--	--	--	--	--	--	--	--	3.3E+04
N-Nitrosodiphenylamine[C]	0	--	--	6.0E+01	--	--	6.7E+04	--	--	--	--	--	--	--	--	6.7E+04
N-Nitrosodi-n-propylamine[C]	0	--	--	5.1E+00	--	--	5.7E+03	--	--	--	--	--	--	--	--	5.7E+03
Nonylphenol	0	7.0E+00	1.7E+00	--	8.1E+02	1.9E+03	--	--	--	--	--	--	--	8.1E+02	1.9E+03	--
Parathion	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB Total[C]	0	--	3.0E-02	6.4E-04	--	3.3E+01	7.1E-01	--	--	--	--	--	--	--	3.3E+01	7.1E-01
Pentachlorophenol [C]	0	1.3E+01	7.9E+00	3.0E+01	1.5E+03	8.8E+03	3.3E+04	--	--	--	--	--	--	1.5E+03	8.8E+03	3.3E+04

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			**Most Limiting Allocations**		
		Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	Acute	Chronic	HH	**Acute**	**Chronic**	**HH**
Phenol	0	--	--	8.6E+05	--	--	9.6E+08	--	--	--	--	--	--	--	--	**9.6E+08**
Phosphorus (Elemental)	0	--	1.0E-01	--	--	1.1E+02	--	--	--	--	--	--	--	--	**1.1E+02**	--
Pyrene	0	--	--	4.0E+03	--	--	4.4E+06	--	--	--	--	--	--	--	--	**4.4E+06**
Radionuclides	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beta and Photon Activity (mrem/yr)	0	--	--	4.0E+00	--	--	4.4E+03	--	--	--	--	--	--	--	--	**4.4E+03**
Selenium	0	2.9E+02	7.1E+01	4.2E+03	3.3E+04	7.9E+04	4.7E+06	--	--	--	--	--	--	**3.3E+04**	**7.9E+04**	**4.7E+06**
Silver	0	1.9E+00	--	--	2.2E+02	--	--	--	--	--	--	--	--	**2.2E+02**	--	--
1,1,2,2-Tetrachloroethane[C]	0	--	--	4.0E+01	--	--	4.4E+04	--	--	--	--	--	--	--	--	**4.4E+04**
Tetrachloroethylene[C]	0	--	--	3.3E+01	--	--	3.7E+04	--	--	--	--	--	--	--	--	**3.7E+04**
Thallium	0	--	--	4.7E-01	--	--	5.2E+02	--	--	--	--	--	--	--	--	**5.2E+02**
Toluene	0	--	--	6.0E+03	--	--	6.7E+06	--	--	--	--	--	--	--	--	**6.7E+06**
Toxaphene [C]	0	2.1E-01	2.0E-04	2.8E-03	2.4E+01	2.2E-01	3.1E+00	--	--	--	--	--	--	**2.4E+01**	**2.2E-01**	**3.1E+00**
Tributyltin	0	4.2E-01	7.4E-03	--	4.8E+01	8.2E+00	--	--	--	--	--	--	--	**4.8E+01**	**8.2E+00**	--
1,2,4-Trichlorobenzene	0	--	--	7.0E+01	--	--	7.8E+04	--	--	--	--	--	--	--	--	**7.8E+04**
1,1,2-Trichloroethane[C]		--	--	1.6E+02	--	--	1.8E+05	--	--	--	--	--	--	--	--	**1.8E+05**
Trichloroethylene [C]	0	--	--	3.0E+02	--	--	3.3E+05	--	--	--	--	--	--	--	--	**3.3E+05**
2,4,6-Trichlorophenol [C]	0	--	--	2.4E+01	--	--	2.7E+04	--	--	--	--	--	--	--	--	**2.7E+04**
Vinyl Chloride[C]	0	--	--	2.4E+01	--	--	2.7E+04	--	--	--	--	--	--	--	--	**2.7E+04**
Zinc	0	9.0E+01	8.1E+01	2.6E+04	1.0E+04	9.0E+04	2.9E+07	--	--	--	--	--	--	**1.0E+04**	**9.0E+04**	**2.9E+07**

Notes:

1. All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
2. Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
3. Metals measured as Dissolved, unless specified otherwise
4. "C" indicates a carcinogenic parameter
5. For transition zone waters, spreadsheet prints the lesser of the freshwater and saltwater water quality criteria.
6. Regular WLA = (WQC x WLA multiplier) - (WLA multiplier - 1)(background conc.)
7. Antideg. Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic
   = (0.1(WQC - background conc.) + background conc.) for human health
8. Antideg. WLA = (Antideg. Baseline)(WLA multiplier) - (WLA multiplier - 1)(background conc.)

Metal	Site Specific Target Value (SSTV)
Antimony	7.1E+05
Arsenic III	3.2E+03
Cadmium	1.8E+03
Chromium III	#VALUE!
Chromium VI	3.3E+04
Copper	4.3E+02
Lead	6.2E+03
Mercury	8.3E+01
Nickel	3.4E+03
Selenium	1.3E+04
Silver	8.7E+01
Zinc	4.1E+03

Note: do not use QL's lower than the minimum QL's provided in agency guidance

Permit No.	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX	Start Date	End Date
VA0081264	FLOW	17.96	19.60				01-Sep-2007	30-Sep-2007
VA0081264	FLOW	17.46	20.16				01-Oct-2007	31-Oct-2007
VA0081264	FLOW						01-Nov-2007	30-Nov-2007
VA0081264	FLOW	17.38	18.49				01-Nov-2007	30-Nov-2007
VA0081264	FLOW	17.69	23.66				01-Dec-2007	31-Dec-2007
VA0081264	FLOW	18.20	20.02				01-Jan-2008	31-Jan-2008
VA0081264	FLOW	19.25	25.65				01-Feb-2008	29-Feb-2008
VA0081264	FLOW	18.99	25.08				01-Mar-2008	31-Mar-2008
VA0081264	FLOW	20.42	31.59				01-Apr-2008	30-Apr-2008
VA0081264	FLOW	19.62	21.82				01-May-2008	31-May-2008
VA0081264	FLOW	20.09	22.46				01-Jun-2008	30-Jun-2008
VA0081264	FLOW	18.27	21.46				01-Jul-2008	31-Jul-2008
VA0081264	FLOW	17.39	19.53				01-Aug-2008	31-Aug-2008
VA0081264	FLOW	19.69	32.29				01-Sep-2008	30-Sep-2008
VA0081264	FLOW	18.95	21.76				01-Oct-2008	31-Oct-2008
VA0081264	FLOW	20.89	26.59				01-Nov-2008	30-Nov-2008
VA0081264	FLOW	22.60	34.15				01-Dec-2008	31-Dec-2008
VA0081264	FLOW	21.09	23.25				01-Jan-2009	31-Jan-2009
VA0081264	FLOW	18.59	20.69				01-Feb-2009	28-Feb-2009
VA0081264	FLOW	21.07	30.23				01-Mar-2009	31-Mar-2009
VA0081264	FLOW	17.24	18.83				01-Apr-2009	30-Apr-2009
VA0081264	FLOW	18.46	25.04				01-May-2009	31-May-2009
VA0081264	FLOW	20.15	28.53				01-Jun-2009	30-Jun-2009
VA0081264	FLOW	17.54	19.39				01-Jul-2009	31-Jul-2009
VA0081264	FLOW	21.27	29.01				01-Aug-2009	31-Aug-2009
VA0081264	FLOW	22.74	44.31				01-Sep-2009	30-Sep-2009
VA0081264	FLOW	19.65	24.42				01-Oct-2009	31-Oct-2009
VA0081264	FLOW	26.27	62.21				01-Nov-2009	30-Nov-2009
VA0081264	FLOW	29.11	51.10				01-Dec-2009	31-Dec-2009
VA0081264	FLOW	18.20	23.40				01-Jan-2010	31-Jan-2010
VA0081264	FLOW	20.64	41.45				01-Feb-2010	28-Feb-2010
VA0081264	FLOW	18.29	32.23				01-Mar-2010	31-Mar-2010
VA0081264	FLOW	15.73	19.49				01-Apr-2010	30-Apr-2010
VA0081264	FLOW	14.77	19.97				01-May-2010	31-May-2010
VA0081264	FLOW	16.55	19.36				01-Jun-2010	30-Jun-2010
VA0081264	FLOW	17.41	20.71				01-Jul-2010	31-Jul-2010
VA0081264	FLOW	16.46	17.70				01-Aug-2010	31-Aug-2010
VA0081264	FLOW	18.32	43.65				01-Sep-2010	30-Sep-2010
VA0081264	FLOW	20.78	43.62				01-Oct-2010	31-Oct-2010
VA0081264	FLOW	16.26	17.88				01-Nov-2010	30-Nov-2010
VA0081264	FLOW	17.22	19.78				01-Dec-2010	31-Dec-2010
VA0081264	FLOW	17.81	24.43				01-Jan-2011	31-Jan-2011
VA0081264	FLOW	16.38	21.34				01-Feb-2011	28-Feb-2011
VA0081264	FLOW	14.78	17.02				01-Mar-2011	31-Mar-2011
VA0081264	FLOW	14.86	16.83				01-Apr-2011	30-Apr-2011
VA0081264	FLOW	13.22	16.09				01-May-2011	31-May-2011
VA0081264	FLOW	11.57	13.08				01-Jun-2011	30-Jun-2011
VA0081264	FLOW	12.36	15.16				01-Jul-2011	31-Jul-2011
VA0081264	FLOW	14.14	32.59				01-Aug-2011	31-Aug-2011
VA0081264	FLOW	16.13	19.20				01-Sep-2011	30-Sep-2011
VA0081264	FLOW	12.90	15.87				01-Oct-2011	31-Oct-2011
VA0081264	FLOW	14.13	15.09				01-Nov-2011	30-Nov-2011
VA0081264	FLOW	14.82	15.79				01-Dec-2011	31-Dec-2011
VA0081264	FLOW						01-Jan-2012	31-Jan-2012
VA0081264	PH			6.8		7.2	01-Sep-2007	30-Sep-2007
VA0081264	PH			6.8		7.4	01-Oct-2007	31-Oct-2007
VA0081264	PH			7.1		7.5	01-Nov-2007	30-Nov-2007
VA0081264	PH						01-Nov-2007	30-Nov-2007
VA0081264	PH			7.1		7.4	01-Dec-2007	31-Dec-2007
VA0081264	PH			6.9		7.3	01-Jan-2008	31-Jan-2008

Permit No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX	Start Date	End Date
VA0081264	PH			7.0		7.3	01-Feb-2008	29-Feb-2008
VA0081264	PH			7.1		7.3	01-Mar-2008	31-Mar-2008
VA0081264	PH			7.1		7.3	01-Apr-2008	30-Apr-2008
VA0081264	PH			6.8		7.3	01-May-2008	31-May-2008
VA0081264	PH			7.0		7.2	01-Jun-2008	30-Jun-2008
VA0081264	PH			6.7		7.2	01-Jul-2008	31-Jul-2008
VA0081264	PH			6.9		7.4	01-Aug-2008	31-Aug-2008
VA0081264	PH			6.9		7.4	01-Sep-2008	30-Sep-2008
VA0081264	PH			7.1		7.3	01-Oct-2008	31-Oct-2008
VA0081264	PH			7.0		7.4	01-Nov-2008	30-Nov-2008
VA0081264	PH			6.9		7.3	01-Dec-2008	31-Dec-2008
VA0081264	PH			7.1		7.4	01-Jan-2009	31-Jan-2009
VA0081264	PH			7.1		7.3	01-Feb-2009	28-Feb-2009
VA0081264	PH			6.9		7.2	01-Mar-2009	31-Mar-2009
VA0081264	PH			6.9		7.2	01-Apr-2009	30-Apr-2009
VA0081264	PH			6.9		7.2	01-May-2009	31-May-2009
VA0081264	PH			6.7		7.2	01-Jun-2009	30-Jun-2009
VA0081264	PH			7.0		7.2	01-Jul-2009	31-Jul-2009
VA0081264	PH			6.9		7.3	01-Aug-2009	31-Aug-2009
VA0081264	PH			6.8		7.1	01-Sep-2009	30-Sep-2009
VA0081264	PH			6.9		7.2	01-Oct-2009	31-Oct-2009
VA0081264	PH			6.7		7.1	01-Nov-2009	30-Nov-2009
VA0081264	PH			6.5		7.4	01-Dec-2009	31-Dec-2009
VA0081264	PH			6.8		7.2	01-Jan-2010	31-Jan-2010
VA0081264	PH			6.8		7.4	01-Feb-2010	28-Feb-2010
VA0081264	PH			6.8		7.5	01-Mar-2010	31-Mar-2010
VA0081264	PH			6.9		7.2	01-Apr-2010	30-Apr-2010
VA0081264	PH			7.0		7.5	01-May-2010	31-May-2010
VA0081264	PH			7.1		7.3	01-Jun-2010	30-Jun-2010
VA0081264	PH			7.0		7.9	01-Jul-2010	31-Jul-2010
VA0081264	PH			7.0		7.4	01-Aug-2010	31-Aug-2010
VA0081264	PH			7.0		7.8	01-Sep-2010	30-Sep-2010
VA0081264	PH			6.7		7.3	01-Oct-2010	31-Oct-2010
VA0081264	PH			6.9		7.2	01-Nov-2010	30-Nov-2010
VA0081264	PH			7.0		7.2	01-Dec-2010	31-Dec-2010
VA0081264	PH			6.9		7.1	01-Jan-2011	31-Jan-2011
VA0081264	PH			6.8		7.2	01-Feb-2011	28-Feb-2011
VA0081264	PH			7.1		7.3	01-Mar-2011	31-Mar-2011
VA0081264	PH			7.0		7.3	01-Apr-2011	30-Apr-2011
VA0081264	PH			7.1		7.8	01-May-2011	31-May-2011
VA0081264	PH			6.7		7.4	01-Jun-2011	30-Jun-2011
VA0081264	PH			6.5		7.3	01-Jul-2011	31-Jul-2011
VA0081264	PH			6.2		7.7	01-Aug-2011	31-Aug-2011
VA0081264	PH			6.0		7.0	01-Sep-2011	30-Sep-2011
VA0081264	PH			6.2		7.6	01-Oct-2011	31-Oct-2011
VA0081264	PH			6.8		7.1	01-Nov-2011	30-Nov-2011
VA0081264	PH			7.0		7.5	01-Dec-2011	31-Dec-2011
VA0081264	PH						01-Jan-2012	31-Jan-2012
VA0081264	BOD5	433	497		6	7	01-Sep-2007	30-Sep-2007
VA0081264	BOD5	483	666		7	10	01-Oct-2007	31-Oct-2007
VA0081264	BOD5						01-Nov-2007	30-Nov-2007
VA0081264	BOD5	674	686		10	10	01-Nov-2007	30-Nov-2007
VA0081264	BOD5	871	1003		13	14	01-Dec-2007	31-Dec-2007
VA0081264	BOD5	910	901		13	14	01-Jan-2008	31-Jan-2008
VA0081264	BOD5	982	1372		13	20	01-Feb-2008	29-Feb-2008
VA0081264	BOD5	1146	1615		16	23	01-Mar-2008	31-Mar-2008
VA0081264	BOD5	1239	1446		16	17	01-Apr-2008	30-Apr-2008
VA0081264	BOD5	1099	1291		15	18	01-May-2008	31-May-2008
VA0081264	BOD5	1358	1671		18	22	01-Jun-2008	30-Jun-2008
VA0081264	BOD5	1045	1547		15	21	01-Jul-2008	31-Jul-2008

Permit No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX	Start Date	End Date
VA0081264	BOD5	564	701		9	10	01-Aug-2008	31-Aug-2008
VA0081264	BOD5	594	829		8	9	01-Sep-2008	30-Sep-2008
VA0081264	BOD5	1012	1133		14	16	01-Oct-2008	31-Oct-2008
VA0081264	BOD5	1168	1506		15	19	01-Nov-2008	30-Nov-2008
VA0081264	BOD5	1167	1437		14	17	01-Dec-2008	31-Dec-2008
VA0081264	BOD5	1415	1835		18	22	01-Jan-2009	31-Jan-2009
VA0081264	BOD5	1203	1575		17	22	01-Feb-2009	28-Feb-2009
VA0081264	BOD5	1051	1641		13	19	01-Mar-2009	31-Mar-2009
VA0081264	BOD5	529	539		8	8	01-Apr-2009	30-Apr-2009
VA0081264	BOD5	789	943		11	13	01-May-2009	31-May-2009
VA0081264	BOD5	792	967		11	13	01-Jun-2009	30-Jun-2009
VA0081264	BOD5	551	691		8	10	01-Jul-2009	31-Jul-2009
VA0081264	BOD5	891	1261		11	14	01-Aug-2009	31-Aug-2009
VA0081264	BOD5	664	961		7	8	01-Sep-2009	30-Sep-2009
VA0081264	BOD5	812	917		11	12	01-Oct-2009	31-Oct-2009
VA0081264	BOD5	1174	1865		12	17	01-Nov-2009	30-Nov-2009
VA0081264	BOD5	1719	2801		14	18	01-Dec-2009	31-Dec-2009
VA0081264	BOD5	941	1181		14	18	01-Jan-2010	31-Jan-2010
VA0081264	BOD5	1317	1452		18	20	01-Feb-2010	28-Feb-2010
VA0081264	BOD5	1337	1311		19	21	01-Mar-2010	31-Mar-2010
VA0081264	BOD5	843	955		14	16	01-Apr-2010	30-Apr-2010
VA0081264	BOD5	833	968		15	16	01-May-2010	31-May-2010
VA0081264	BOD5	948	1095		15	17	01-Jun-2010	30-Jun-2010
VA0081264	BOD5	825	1106		12	16	01-Jul-2010	31-Jul-2010
VA0081264	BOD5	582	1007		9	16	01-Aug-2010	31-Aug-2010
VA0081264	BOD5	749	783		11	12	01-Sep-2010	30-Sep-2010
VA0081264	BOD5	956	1010		13	15	01-Oct-2010	31-Oct-2010
VA0081264	BOD5	851	926		14	15	01-Nov-2010	30-Nov-2010
VA0081264	BOD5	1039	1082		16	16	01-Dec-2010	31-Dec-2010
VA0081264	BOD5	1133	1593		16	23	01-Jan-2011	31-Jan-2011
VA0081264	BOD5	1033	1330		17	24	01-Feb-2011	28-Feb-2011
VA0081264	BOD5	937	1076		17	21	01-Mar-2011	31-Mar-2011
VA0081264	BOD5	827	1132		15	20	01-Apr-2011	30-Apr-2011
VA0081264	BOD5	595	673		12	13	01-May-2011	31-May-2011
VA0081264	BOD5	391	619		9	15	01-Jun-2011	30-Jun-2011
VA0081264	BOD5	318	388		7	8	01-Jul-2011	31-Jul-2011
VA0081264	BOD5	377	431		7	9	01-Aug-2011	31-Aug-2011
VA0081264	BOD5	461	523		8	8	01-Sep-2011	30-Sep-2011
VA0081264	BOD5	549	720		11	16	01-Oct-2011	31-Oct-2011
VA0081264	BOD5	744	1033		14	19	01-Nov-2011	30-Nov-2011
VA0081264	BOD5	817	1100		14	19	01-Dec-2011	31-Dec-2011
VA0081264	BOD5						01-Jan-2012	31-Jan-2012
VA0081264	TSS	637	765		9	11	01-Sep-2007	30-Sep-2007
VA0081264	TSS	737	920		11	14	01-Oct-2007	31-Oct-2007
VA0081264	TSS						01-Nov-2007	30-Nov-2007
VA0081264	TSS	937	870		14	13	01-Nov-2007	30-Nov-2007
VA0081264	TSS	1225	1376		18	20	01-Dec-2007	31-Dec-2007
VA0081264	TSS	1255	1168		18	18	01-Jan-2008	31-Jan-2008
VA0081264	TSS	1038	1568		14	22	01-Feb-2008	29-Feb-2008
VA0081264	TSS	1064	1494		15	20	01-Mar-2008	31-Mar-2008
VA0081264	TSS	735	957		9	10	01-Apr-2008	30-Apr-2008
VA0081264	TSS	1058	1432		14	20	01-May-2008	31-May-2008
VA0081264	TSS	1281	1465		17	19	01-Jun-2008	30-Jun-2008
VA0081264	TSS	2046	3122		29	42	01-Jul-2008	31-Jul-2008
VA0081264	TSS	723	997		11	15	01-Aug-2008	31-Aug-2008
VA0081264	TSS	742	1003		9.6	11	01-Sep-2008	30-Sep-2008
VA0081264	TSS	1051	1414		15	20	01-Oct-2008	31-Oct-2008
VA0081264	TSS	1127	1234		14	16	01-Nov-2008	30-Nov-2008
VA0081264	TSS	967	1247		11	14	01-Dec-2008	31-Dec-2008
VA0081264	TSS	760	815		9.5	9.9	01-Jan-2009	31-Jan-2009

Permit No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX	Start Date	End Date
VA0081264	TSS	940	1149		14	16	01-Feb-2009	28-Feb-2009
VA0081264	TSS	971	1533		12	18	01-Mar-2009	31-Mar-2009
VA0081264	TSS	566	789		8.6	11	01-Apr-2009	30-Apr-2009
VA0081264	TSS	822	1116		12	16	01-May-2009	31-May-2009
VA0081264	TSS	1083	1427		15	19	01-Jun-2009	30-Jun-2009
VA0081264	TSS	729	910		11	14	01-Jul-2009	31-Jul-2009
VA0081264	TSS	1274	2048		15	23	01-Aug-2009	31-Aug-2009
VA0081264	TSS	930	1325		10	12	01-Sep-2009	30-Sep-2009
VA0081264	TSS	789	910		11	11	01-Oct-2009	31-Oct-2009
VA0081264	TSS	1524	3158		14	20	01-Nov-2009	30-Nov-2009
VA0081264	TSS	2097	4788		16	30	01-Dec-2009	31-Dec-2009
VA0081264	TSS	590	791		8.5	11	01-Jan-2010	31-Jan-2010
VA0081264	TSS	1013	1350		13	14	01-Feb-2010	28-Feb-2010
VA0081264	TSS	1021	905		14	14	01-Mar-2010	31-Mar-2010
VA0081264	TSS	535	596		9.0	11	01-Apr-2010	30-Apr-2010
VA0081264	TSS	736	845		13	15	01-May-2010	31-May-2010
VA0081264	TSS	691	878		11	14	01-Jun-2010	30-Jun-2010
VA0081264	TSS	931	1414		14	20	01-Jul-2010	31-Jul-2010
VA0081264	TSS	566	913		9.1	14	01-Aug-2010	31-Aug-2010
VA0081264	TSS	849	953		12	15	01-Sep-2010	30-Sep-2010
VA0081264	TSS	1094	1196		15	17	01-Oct-2010	31-Oct-2010
VA0081264	TSS	1237	1623		20	27	01-Nov-2010	30-Nov-2010
VA0081264	TSS	1181	1484		18	24	01-Dec-2010	31-Dec-2010
VA0081264	TSS	874	1048		13	15	01-Jan-2011	31-Jan-2011
VA0081264	TSS	822	969		13	15	01-Feb-2011	28-Feb-2011
VA0081264	TSS	710	661		13	12	01-Mar-2011	31-Mar-2011
VA0081264	TSS	681	824		12	15	01-Apr-2011	30-Apr-2011
VA0081264	TSS	577	675		11	12	01-May-2011	31-May-2011
VA0081264	TSS	641	909		15	22	01-Jun-2011	30-Jun-2011
VA0081264	TSS	518	713		11	14	01-Jul-2011	31-Jul-2011
VA0081264	TSS	799	1039		16	22	01-Aug-2011	31-Aug-2011
VA0081264	TSS	618	680		10	10	01-Sep-2011	30-Sep-2011
VA0081264	TSS	630	765		13	16	01-Oct-2011	31-Oct-2011
VA0081264	TSS	812	918		15	17	01-Nov-2011	30-Nov-2011
VA0081264	TSS	1122	1341		20	23	01-Dec-2011	31-Dec-2011
VA0081264	TSS						01-Jan-2012	31-Jan-2012
VA0081264	COLIFORM, FECAL				12		01-Sep-2007	30-Sep-2007
VA0081264	COLIFORM, FECAL				13		01-Oct-2007	31-Oct-2007
VA0081264	COLIFORM, FECAL				25		01-Nov-2007	30-Nov-2007
VA0081264	COLIFORM, FECAL						01-Nov-2007	30-Nov-2007
VA0081264	COLIFORM, FECAL				129		01-Dec-2007	31-Dec-2007
VA0081264	COLIFORM, FECAL				31		01-Jan-2008	31-Jan-2008
VA0081264	COLIFORM, FECAL				16		01-Feb-2008	29-Feb-2008
VA0081264	COLIFORM, FECAL				13		01-Mar-2008	31-Mar-2008
VA0081264	COLIFORM, FECAL				24		01-Apr-2008	30-Apr-2008
VA0081264	COLIFORM, FECAL				27		01-May-2008	31-May-2008
VA0081264	COLIFORM, FECAL				31		01-Jun-2008	30-Jun-2008
VA0081264	COLIFORM, FECAL				45		01-Jul-2008	31-Jul-2008
VA0081264	COLIFORM, FECAL				13		01-Aug-2008	31-Aug-2008
VA0081264	COLIFORM, FECAL				24		01-Sep-2008	30-Sep-2008
VA0081264	COLIFORM, FECAL				19		01-Oct-2008	31-Oct-2008
VA0081264	COLIFORM, FECAL				20		01-Nov-2008	30-Nov-2008
VA0081264	COLIFORM, FECAL				31		01-Dec-2008	31-Dec-2008
VA0081264	COLIFORM, FECAL				41		01-Jan-2009	31-Jan-2009
VA0081264	COLIFORM, FECAL				5		01-Feb-2009	28-Feb-2009
VA0081264	COLIFORM, FECAL				4		01-Mar-2009	31-Mar-2009
VA0081264	COLIFORM, FECAL				7		01-Apr-2009	30-Apr-2009
VA0081264	COLIFORM, FECAL				17		01-May-2009	31-May-2009
VA0081264	COLIFORM, FECAL				28		01-Jun-2009	30-Jun-2009
VA0081264	COLIFORM, FECAL				49		01-Jul-2009	31-Jul-2009

Permit No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX	Start Date	End Date
VA0081264	COLIFORM, FECAL				22		01-Aug-2009	31-Aug-2009
VA0081264	COLIFORM, FECAL				24		01-Sep-2009	30-Sep-2009
VA0081264	COLIFORM, FECAL				10		01-Oct-2009	31-Oct-2009
VA0081264	COLIFORM, FECAL				11		01-Nov-2009	30-Nov-2009
VA0081264	COLIFORM, FECAL				13		01-Dec-2009	31-Dec-2009
VA0081264	COLIFORM, FECAL				7		01-Jan-2010	31-Jan-2010
VA0081264	COLIFORM, FECAL				6		01-Feb-2010	28-Feb-2010
VA0081264	COLIFORM, FECAL				7		01-Mar-2010	31-Mar-2010
VA0081264	COLIFORM, FECAL				2		01-Apr-2010	30-Apr-2010
VA0081264	COLIFORM, FECAL				23		01-May-2010	31-May-2010
VA0081264	COLIFORM, FECAL				26		01-Jun-2010	30-Jun-2010
VA0081264	COLIFORM, FECAL				34		01-Jul-2010	31-Jul-2010
VA0081264	COLIFORM, FECAL				25		01-Aug-2010	31-Aug-2010
VA0081264	COLIFORM, FECAL				33		01-Sep-2010	30-Sep-2010
VA0081264	COLIFORM, FECAL				38		01-Oct-2010	31-Oct-2010
VA0081264	COLIFORM, FECAL				21		01-Nov-2010	30-Nov-2010
VA0081264	COLIFORM, FECAL				15		01-Dec-2010	31-Dec-2010
VA0081264	COLIFORM, FECAL				9		01-Jan-2011	31-Jan-2011
VA0081264	COLIFORM, FECAL				10		01-Feb-2011	28-Feb-2011
VA0081264	COLIFORM, FECAL				6		01-Mar-2011	31-Mar-2011
VA0081264	COLIFORM, FECAL				14		01-Apr-2011	30-Apr-2011
VA0081264	COLIFORM, FECAL				15		01-May-2011	31-May-2011
VA0081264	COLIFORM, FECAL				21		01-Jun-2011	30-Jun-2011
VA0081264	COLIFORM, FECAL				35		01-Jul-2011	31-Jul-2011
VA0081264	COLIFORM, FECAL				10		01-Aug-2011	31-Aug-2011
VA0081264	COLIFORM, FECAL				11		01-Sep-2011	30-Sep-2011
VA0081264	COLIFORM, FECAL				6		01-Oct-2011	31-Oct-2011
VA0081264	COLIFORM, FECAL				11		01-Nov-2011	30-Nov-2011
VA0081264	COLIFORM, FECAL				28		01-Dec-2011	31-Dec-2011
VA0081264	COLIFORM, FECAL						01-Jan-2012	31-Jan-2012
VA0081264	PHOSPHORUS, TOTAL (AS P)	101	110		1	2	01-Sep-2007	30-Sep-2007
VA0081264	PHOSPHORUS, TOTAL (AS P)	94	106		1	2	01-Oct-2007	31-Oct-2007
VA0081264	PHOSPHORUS, TOTAL (AS P)						01-Nov-2007	30-Nov-2007
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.5		01-Nov-2007	30-Nov-2007
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.3		01-Dec-2007	31-Dec-2007
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.3		01-Jan-2008	31-Jan-2008
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.3		01-Feb-2008	29-Feb-2008
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.5		01-Mar-2008	31-Mar-2008
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.3		01-Apr-2008	30-Apr-2008
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.4		01-May-2008	31-May-2008
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.4		01-Jun-2008	30-Jun-2008
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.6		01-Jul-2008	31-Jul-2008
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.0		01-Aug-2008	31-Aug-2008
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.3		01-Sep-2008	30-Sep-2008
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.4		01-Oct-2008	31-Oct-2008
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.4		01-Nov-2008	30-Nov-2008
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.1		01-Dec-2008	31-Dec-2008
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.2		01-Jan-2009	31-Jan-2009
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.5		01-Feb-2009	28-Feb-2009
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.2		01-Mar-2009	31-Mar-2009
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.6		01-Apr-2009	30-Apr-2009
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.4		01-May-2009	31-May-2009
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.2		01-Jun-2009	30-Jun-2009
VA0081264	PHOSPHORUS, TOTAL (AS P)				1		01-Jul-2009	31-Jul-2009
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.2		01-Aug-2009	31-Aug-2009
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.2		01-Sep-2009	30-Sep-2009
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.4		01-Oct-2009	31-Oct-2009
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.1		01-Nov-2009	30-Nov-2009
VA0081264	PHOSPHORUS, TOTAL (AS P)				0.74		01-Dec-2009	31-Dec-2009
VA0081264	PHOSPHORUS, TOTAL (AS P)				0.82		01-Jan-2010	31-Jan-2010

Permit No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX	Start Date	End Date
VA0081264	PHOSPHORUS, TOTAL (AS P)				0.86		01-Feb-2010	28-Feb-2010
VA0081264	PHOSPHORUS, TOTAL (AS P)				0.95		01-Mar-2010	31-Mar-2010
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.0		01-Apr-2010	30-Apr-2010
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.4		01-May-2010	31-May-2010
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.0		01-Jun-2010	30-Jun-2010
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.3		01-Jul-2010	31-Jul-2010
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.1		01-Aug-2010	31-Aug-2010
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.4		01-Sep-2010	30-Sep-2010
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.2		01-Oct-2010	31-Oct-2010
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.5		01-Nov-2010	30-Nov-2010
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.2		01-Dec-2010	31-Dec-2010
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.1		01-Jan-2011	31-Jan-2011
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.3		01-Feb-2011	28-Feb-2011
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.5		01-Mar-2011	31-Mar-2011
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.2		01-Apr-2011	30-Apr-2011
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.5		01-May-2011	31-May-2011
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.6		01-Jun-2011	30-Jun-2011
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.4		01-Jul-2011	31-Jul-2011
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.4		01-Aug-2011	31-Aug-2011
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.5		01-Sep-2011	30-Sep-2011
VA0081264	PHOSPHORUS, TOTAL (AS P)				1.5		01-Oct-2011	31-Oct-2011
VA0081264	PHOSPHORUS, TOTAL (AS P)				0.86		01-Nov-2011	30-Nov-2011
VA0081264	PHOSPHORUS, TOTAL (AS P)				0.85		01-Dec-2011	31-Dec-2011
VA0081264	PHOSPHORUS, TOTAL (AS P)						01-Jan-2012	31-Jan-2012
VA0081264	NITROGEN, TOTAL (AS N)	1635	1766		24	25	01-Sep-2007	30-Sep-2007
VA0081264	NITROGEN, TOTAL (AS N)	1553	1570		24	24	01-Oct-2007	31-Oct-2007
VA0081264	NITROGEN, TOTAL (AS N)						01-Nov-2007	30-Nov-2007
VA0081264	CL2, TOTAL CONTACT			0.8			01-Sep-2007	30-Sep-2007
VA0081264	CL2, TOTAL CONTACT			1.0			01-Oct-2007	31-Oct-2007
VA0081264	CL2, TOTAL CONTACT			1.4			01-Nov-2007	30-Nov-2007
VA0081264	CL2, TOTAL CONTACT						01-Nov-2007	30-Nov-2007
VA0081264	CL2, TOTAL CONTACT			0.83			01-Dec-2007	31-Dec-2007
VA0081264	CL2, TOTAL CONTACT			0.77			01-Jan-2008	31-Jan-2008
VA0081264	CL2, TOTAL CONTACT			1.1			01-Feb-2008	29-Feb-2008
VA0081264	CL2, TOTAL CONTACT			0.29			01-Mar-2008	31-Mar-2008
VA0081264	CL2, TOTAL CONTACT			1.09			01-Apr-2008	30-Apr-2008
VA0081264	CL2, TOTAL CONTACT			1.3			01-May-2008	31-May-2008
VA0081264	CL2, TOTAL CONTACT			1.1			01-Jun-2008	30-Jun-2008
VA0081264	CL2, TOTAL CONTACT			0.11			01-Jul-2008	31-Jul-2008
VA0081264	CL2, TOTAL CONTACT			0.040			01-Aug-2008	31-Aug-2008
VA0081264	CL2, TOTAL CONTACT			0.82			01-Sep-2008	30-Sep-2008
VA0081264	CL2, TOTAL CONTACT			0.59			01-Oct-2008	31-Oct-2008
VA0081264	CL2, TOTAL CONTACT			0.37			01-Nov-2008	30-Nov-2008
VA0081264	CL2, TOTAL CONTACT			0.92			01-Dec-2008	31-Dec-2008
VA0081264	CL2, TOTAL CONTACT			0.31			01-Jan-2009	31-Jan-2009
VA0081264	CL2, TOTAL CONTACT			1.2			01-Feb-2009	28-Feb-2009
VA0081264	CL2, TOTAL CONTACT			1.1			01-Mar-2009	31-Mar-2009
VA0081264	CL2, TOTAL CONTACT			0.80			01-Apr-2009	30-Apr-2009
VA0081264	CL2, TOTAL CONTACT			1.3			01-May-2009	31-May-2009
VA0081264	CL2, TOTAL CONTACT			1.1			01-Jun-2009	30-Jun-2009
VA0081264	CL2, TOTAL CONTACT			1.2			01-Jul-2009	31-Jul-2009
VA0081264	CL2, TOTAL CONTACT			0.0			01-Aug-2009	31-Aug-2009
VA0081264	CL2, TOTAL CONTACT			1.3			01-Sep-2009	30-Sep-2009
VA0081264	CL2, TOTAL CONTACT			1.4			01-Oct-2009	31-Oct-2009
VA0081264	CL2, TOTAL CONTACT			0.72			01-Nov-2009	30-Nov-2009
VA0081264	CL2, TOTAL CONTACT			0.0			01-Dec-2009	31-Dec-2009
VA0081264	CL2, TOTAL CONTACT			1.4			01-Jan-2010	31-Jan-2010
VA0081264	CL2, TOTAL CONTACT			1.3			01-Feb-2010	28-Feb-2010
VA0081264	CL2, TOTAL CONTACT			0.97			01-Mar-2010	31-Mar-2010
VA0081264	CL2, TOTAL CONTACT			1.0			01-Apr-2010	30-Apr-2010

Permit No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX	Start Date	End Date
VA0081264	CL2, TOTAL CONTACT			0.60			01-May-2010	31-May-2010
VA0081264	CL2, TOTAL CONTACT			0.82			01-Jun-2010	30-Jun-2010
VA0081264	CL2, TOTAL CONTACT			0.85			01-Jul-2010	31-Jul-2010
VA0081264	CL2, TOTAL CONTACT			1.1			01-Aug-2010	31-Aug-2010
VA0081264	CL2, TOTAL CONTACT			0.77			01-Sep-2010	30-Sep-2010
VA0081264	CL2, TOTAL CONTACT			1.1			01-Oct-2010	31-Oct-2010
VA0081264	CL2, TOTAL CONTACT			0.60			01-Nov-2010	30-Nov-2010
VA0081264	CL2, TOTAL CONTACT			1.1			01-Dec-2010	31-Dec-2010
VA0081264	CL2, TOTAL CONTACT			0.68			01-Jan-2011	31-Jan-2011
VA0081264	CL2, TOTAL CONTACT			1.3			01-Feb-2011	28-Feb-2011
VA0081264	CL2, TOTAL CONTACT			0.41			01-Mar-2011	31-Mar-2011
VA0081264	CL2, TOTAL CONTACT			1.4			01-Apr-2011	30-Apr-2011
VA0081264	CL2, TOTAL CONTACT			0.50			01-May-2011	31-May-2011
VA0081264	CL2, TOTAL CONTACT			0.0			01-Jun-2011	30-Jun-2011
VA0081264	CL2, TOTAL CONTACT			1.1			01-Jul-2011	31-Jul-2011
VA0081264	CL2, TOTAL CONTACT			0.81			01-Aug-2011	31-Aug-2011
VA0081264	CL2, TOTAL CONTACT			0.98			01-Sep-2011	30-Sep-2011
VA0081264	CL2, TOTAL CONTACT			1.0			01-Oct-2011	31-Oct-2011
VA0081264	CL2, TOTAL CONTACT			1.3			01-Nov-2011	30-Nov-2011
VA0081264	CL2, TOTAL CONTACT			1.5			01-Dec-2011	31-Dec-2011
VA0081264	CL2, TOTAL CONTACT						01-Jan-2012	31-Jan-2012
VA0081264	CL2, TOTAL FINAL				0.0	0.1	01-Sep-2007	30-Sep-2007
VA0081264	CL2, TOTAL FINAL				0.0	0.0	01-Oct-2007	31-Oct-2007
VA0081264	CL2, TOTAL FINAL						01-Nov-2007	30-Nov-2007
VA0081264	CL2, TOTAL FINAL				0.090	0.14	01-Nov-2007	30-Nov-2007
VA0081264	CL2, TOTAL FINAL				0.05	0.10	01-Dec-2007	31-Dec-2007
VA0081264	CL2, TOTAL FINAL				0.052	0.19	01-Jan-2008	31-Jan-2008
VA0081264	CL2, TOTAL FINAL				0.050	0.096	01-Feb-2008	29-Feb-2008
VA0081264	CL2, TOTAL FINAL				<QL	<QL	01-Mar-2008	31-Mar-2008
VA0081264	CL2, TOTAL FINAL				0.035	0.13	01-Apr-2008	30-Apr-2008
VA0081264	CL2, TOTAL FINAL				0.017	0.054	01-May-2008	31-May-2008
VA0081264	CL2, TOTAL FINAL				0.0053	0.023	01-Jun-2008	30-Jun-2008
VA0081264	CL2, TOTAL FINAL				0.035	0.056	01-Jul-2008	31-Jul-2008
VA0081264	CL2, TOTAL FINAL				0.011	0.050	01-Aug-2008	31-Aug-2008
VA0081264	CL2, TOTAL FINAL				0.035	0.055	01-Sep-2008	30-Sep-2008
VA0081264	CL2, TOTAL FINAL				0.023	0.020	01-Oct-2008	31-Oct-2008
VA0081264	CL2, TOTAL FINAL				0.096	0.18	01-Nov-2008	30-Nov-2008
VA0081264	CL2, TOTAL FINAL				0.016	0.050	01-Dec-2008	31-Dec-2008
VA0081264	CL2, TOTAL FINAL				0.017	0.050	01-Jan-2009	31-Jan-2009
VA0081264	CL2, TOTAL FINAL				<QL	<QL	01-Feb-2009	28-Feb-2009
VA0081264	CL2, TOTAL FINAL				0.077	0.15	01-Mar-2009	31-Mar-2009
VA0081264	CL2, TOTAL FINAL				0.062	0.13	01-Apr-2009	30-Apr-2009
VA0081264	CL2, TOTAL FINAL				0.030	0.064	01-May-2009	31-May-2009
VA0081264	CL2, TOTAL FINAL				0.074	0.20	01-Jun-2009	30-Jun-2009
VA0081264	CL2, TOTAL FINAL				0.066	0.12	01-Jul-2009	31-Jul-2009
VA0081264	CL2, TOTAL FINAL				0.0032	0.014	01-Aug-2009	31-Aug-2009
VA0081264	CL2, TOTAL FINAL				0.065	0.11	01-Sep-2009	30-Sep-2009
VA0081264	CL2, TOTAL FINAL				0.025	0.093	01-Oct-2009	31-Oct-2009
VA0081264	CL2, TOTAL FINAL				<QL	<QL	01-Nov-2009	30-Nov-2009
VA0081264	CL2, TOTAL FINAL				<QL	<QL	01-Dec-2009	31-Dec-2009
VA0081264	CL2, TOTAL FINAL				0.021	0.026	01-Jan-2010	31-Jan-2010
VA0081264	CL2, TOTAL FINAL				0.014	0.050	01-Feb-2010	28-Feb-2010
VA0081264	CL2, TOTAL FINAL				0.013	0.038	01-Mar-2010	31-Mar-2010
VA0081264	CL2, TOTAL FINAL				0.029	0.11	01-Apr-2010	30-Apr-2010
VA0081264	CL2, TOTAL FINAL				0.024	0.033	01-May-2010	31-May-2010
VA0081264	CL2, TOTAL FINAL				0.028	0.014	01-Jun-2010	30-Jun-2010
VA0081264	CL2, TOTAL FINAL				0.061	0.12	01-Jul-2010	31-Jul-2010
VA0081264	CL2, TOTAL FINAL				0.050	0.086	01-Aug-2010	31-Aug-2010
VA0081264	CL2, TOTAL FINAL				0.050	0.035	01-Sep-2010	30-Sep-2010
VA0081264	CL2, TOTAL FINAL				0.039	0.088	01-Oct-2010	31-Oct-2010

Permit No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX	Start Date	End Date
VA0081264	CL2, TOTAL FINAL				0.032	0.036	01-Nov-2010	30-Nov-2010
VA0081264	CL2, TOTAL FINAL				0.056	0.099	01-Dec-2010	31-Dec-2010
VA0081264	CL2, TOTAL FINAL				0.11	0.24	01-Jan-2011	31-Jan-2011
VA0081264	CL2, TOTAL FINAL				0.0075	0.030	01-Feb-2011	28-Feb-2011
VA0081264	CL2, TOTAL FINAL				0.0048	0.021	01-Mar-2011	31-Mar-2011
VA0081264	CL2, TOTAL FINAL				0.025	0.021	01-Apr-2011	30-Apr-2011
VA0081264	CL2, TOTAL FINAL				0.036	0.080	01-May-2011	31-May-2011
VA0081264	CL2, TOTAL FINAL				0.17	<QL	01-Jun-2011	30-Jun-2011
VA0081264	CL2, TOTAL FINAL				0.051	0.19	01-Jul-2011	31-Jul-2011
VA0081264	CL2, TOTAL FINAL				0.072	0.14	01-Aug-2011	31-Aug-2011
VA0081264	CL2, TOTAL FINAL				0.025	0.066	01-Sep-2011	30-Sep-2011
VA0081264	CL2, TOTAL FINAL				<QL	<QL	01-Oct-2011	31-Oct-2011
VA0081264	CL2, TOTAL FINAL				0.011	0.041	01-Nov-2011	30-Nov-2011
VA0081264	CL2, TOTAL FINAL				<QL	<QL	01-Dec-2011	31-Dec-2011
VA0081264	CL2, TOTAL FINAL						01-Jan-2012	31-Jan-2012
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)					1.5	01-Nov-2007	30-Nov-2007
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.4		01-Dec-2007	31-Dec-2007
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.3		01-Jan-2008	31-Jan-2008
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.2		01-Feb-2008	29-Feb-2008
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.3		01-Mar-2008	31-Mar-2008
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.3		01-Apr-2008	30-Apr-2008
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.4		01-May-2008	31-May-2008
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.4		01-Jun-2008	30-Jun-2008
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.4		01-Jul-2008	31-Jul-2008
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.3		01-Aug-2008	31-Aug-2008
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.3		01-Sep-2008	30-Sep-2008
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.3		01-Oct-2008	31-Oct-2008
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.3		01-Nov-2008	30-Nov-2008
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.3		01-Dec-2008	31-Dec-2008
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.2		01-Jan-2009	31-Jan-2009
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.4		01-Feb-2009	28-Feb-2009
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.3		01-Mar-2009	31-Mar-2009
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.4		01-Apr-2009	30-Apr-2009
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.4		01-May-2009	31-May-2009
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.3		01-Jun-2009	30-Jun-2009
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.4		01-Jul-2009	31-Jul-2009
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.3		01-Aug-2009	31-Aug-2009
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.3		01-Sep-2009	30-Sep-2009
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.3		01-Oct-2009	31-Oct-2009
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.3		01-Nov-2009	30-Nov-2009
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.3		01-Dec-2009	31-Dec-2009
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				0.82		01-Jan-2010	31-Jan-2010
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				0.84		01-Feb-2010	28-Feb-2010
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				0.88		01-Mar-2010	31-Mar-2010
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				0.92		01-Apr-2010	30-Apr-2010
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.0		01-May-2010	31-May-2010
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.0		01-Jun-2010	30-Jun-2010
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.1		01-Jul-2010	31-Jul-2010
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.1		01-Aug-2010	31-Aug-2010
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.1		01-Sep-2010	30-Sep-2010
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.1		01-Oct-2010	31-Oct-2010
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.2		01-Nov-2010	30-Nov-2010
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.2		01-Dec-2010	31-Dec-2010
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.1		01-Jan-2011	31-Jan-2011
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.2		01-Feb-2011	28-Feb-2011
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.3		01-Mar-2011	31-Mar-2011
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.3		01-Apr-2011	30-Apr-2011
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.3		01-May-2011	31-May-2011
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.4		01-Jun-2011	30-Jun-2011
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.4		01-Jul-2011	31-Jul-2011

Permit No	Parameter Description	QTYAVG	QTYMAX	CONCMIN	CONCAVG	CONCMAX	Start Date	End Date
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.4		01-Aug-2011	31-Aug-2011
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.4		01-Sep-2011	30-Sep-2011
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.4		01-Oct-2011	31-Oct-2011
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.4		01-Nov-2011	30-Nov-2011
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)				1.3		01-Dec-2011	31-Dec-2011
VA0081264	PHOSPHORUS, TOTAL (AS P) (YEAR-TO-DATE)						01-Jan-2012	31-Jan-2012
VA0081264	PHOSPHORUS, TOTAL - ANNUAL AVERAGE (MG/L)				1.3		01-Jan-2008	31-Dec-2008
VA0081264	PHOSPHORUS, TOTAL - ANNUAL AVERAGE (MG/L)				1.3		01-Dec-2008	31-Dec-2008
VA0081264	PHOSPHORUS, TOTAL - ANNUAL AVERAGE (MG/L)				1.3		01-Jan-2009	31-Dec-2009
VA0081264	PHOSPHORUS, TOTAL - ANNUAL AVERAGE (MG/L)				1.2		01-Jan-2010	31-Dec-2010
VA0081264	PHOSPHORUS, TOTAL - ANNUAL AVERAGE (MG/L)				1.3		01-Jan-2011	31-Dec-2011

Discoverer Query
Run 2/1/12 DOA

VIRGINIA DEQ NO EXPOSURE CERTIFICATION
FOR EXCLUSION FROM VPDES STORM WATER PERMITTING

Submission of this **No Exposure Certification** constitutes notice that the entity identified below does not require permit authorization for its storm water discharges associated with industrial activity under the VPDES Permit Program due to the existence of a condition of **No Exposure**.

A condition of **No Exposure** exists at an industrial facility when all industrial materials and activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff. Industrial materials or activities include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products. Material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product or waste product. A storm resistant shelter is not required for the following industrial materials and activities:

- drums, barrels, tanks, and similar containers that are tightly sealed, provided those containers are not deteriorated and do not leak. "Sealed" means banded or otherwise secured and without operational taps or valves;
- adequately maintained vehicles used in material handling; and
- final products, other than products that would be mobilized in storm water discharges (e.g., rock salt).

A No Exposure Certification must be provided for each facility qualifying for the No Exposure exclusion. In addition, the exclusion from VPDES permitting is available on a facility-wide basis only, not for individual outfalls. If any industrial activities or materials are or will be exposed to precipitation, the facility is not eligible for the No Exposure exclusion.

By signing and submitting this No Exposure Certification form, the entity below is certifying that a condition of No Exposure exists at its facility or site, and is obligated to comply with the terms and conditions at 9 VAC 25-31-120 E (the VPDES Permit Regulation).

Please Type or Print All Information. ALL INFORMATION ON THIS FORM MUST BE PROVIDED.

1. **Facility Operator Information**

   Name: Hampton Roads Sanitation District

   Mailing Address: 1436 Air Rail Avenue

   City: Virginia Beach State: VA Zip: 23455 Phone: 757-460-2261

2. **Facility/Site Location Information**

   Facility Name: Chesapeake-Elizabeth STP

   Address: 5332 Shore Drive

   City: Virginia Beach State: VA Zip: 23455

   County Name:

   Latitude: 36 54' 24" Longitude: 76 9' 53"

3. **Was the facility or site previously covered under a VPDES storm water permit?** Yes ☑ No ☐

   If "Yes", enter the VPDES permit number: VA0081264

4. **SIC/Activity Codes:** Primary: 4952 Secondary (if applicable):

5. **Total size of facility/site associated with industrial activity:** 22.3 acres

6. **Have you paved or roofed over a formerly exposed pervious area in order to qualify for the No Exposure exclusion?** Yes ☐ No ☑

   If "Yes", please indicate approximately how much area was paved or roofed. Completing this question does *not disqualify you for the No Exposure exclusion. However, DEQ may use this information in considering* whether storm water discharges from your site are likely to have an adverse impact on water quality, in which case you could be required to obtain permit coverage.

   Less than one acre ☐ One to five acres ☐ More than five acres ☐

7. Exposure Checklist

Are any of the following materials or activities exposed to precipitation, now or in the foreseeable future? (Please check either "Yes" or "No" in the appropriate box.) **If you answer "Yes" to any of these questions (1) through (11), you are <u>not</u> eligible for the No Exposure exclusion.**

	Yes	No
(1) Using, storing or cleaning industrial machinery or equipment, and areas where residuals from using, storing or cleaning industrial machinery or equipment remain and are exposed to storm water	☐	☑
(2) Materials or residuals on the ground or in storm water inlets from spill/leaks	☐	☑
(3) Materials or products from past industrial activity	☐	☑
(4) Material handling equipment (except adequately maintained vehicles)	☐	☑
(5) Materials or products during loading/unloading or transporting activities	☐	☑
(6) Materials or products stored outdoors (except final products intended for outside use [e.g., new cars] where exposure to storm water does not result in the discharge of pollutants)	☐	☑
(7) Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers	☐	☑
(8) Materials or products handled/stored on roads or railways owned or maintained by the discharger	☐	☑
(9) Waste material (except waste in covered, non-leaking containers [e.g., dumpsters])	☐	☑
(10) Application or disposal of process wastewater (unless otherwise permitted)	☐	☑
(11) Particulate matter or visible deposits of residuals from roof stacks and/or vents not otherwise regulated (i.e., under an air quality control permit) and evident in the storm water outflow	☐	☑

8. Certification Statement

I certify under penalty of law that I have read and understand the eligibility requirements for claiming a condition of no exposure and obtaining an exclusion from VPDES storm water permitting; and that there are no discharges of storm water contaminated by exposure to industrial activities or materials from the industrial facility identified in this document (except as allowed under 9 VAC 25-31-120 E 2).

I understand that I am obligated to submit a No Exposure Certification form once every five years to the Department of Environmental Quality and, if requested, to the operator of the local MS4 into which this facility discharges (where applicable). I understand that I must allow the Department, or MS4 operator where the discharge is into the local MS4, to perform inspections to confirm the condition of no exposure and to make such inspection reports publicly available upon request. I understand that I must obtain coverage under a VPDES permit prior to any point source discharge of storm water associated with industrial activity from the facility.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly involved in gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name: Edward G. Henifin, P.E.

Print Title: General Manager

Signature: [signature]

Date: 12/5/2011

For Department of Environmental Quality Use Only

Accepted/Not Accepted by: [signature] Date: 1/31/12

Austin, Deanna (DEQ)

From: Nicklas, Sharon [SNICKLAS@HRSD.COM]
Sent: Wednesday, February 01, 2012 2:53 PM
To: Austin, Deanna (DEQ)
Subject: FW: Materials Stored at Ches Liz

Hi Deanna,

Please see Jeff's email below.

Sharon Nicklas
HRSD-Permits Manager
757-460-4245
snicklas@hrsd.com

From: Layne, Jeffrey
Sent: Wednesday, February 01, 2012 2:20 PM
To: Nicklas, Sharon
Subject: RE: Materials Stored at Ches Liz

Sharon,
I would add hydrogen peroxide to the list. The peroxide is stored in a double walled tank owned by US Peroxide and we will most likely rent the tank and peroxide service for another 3 years.

Jeff

From: Austin, Deanna (DEQ) [mailto:Deanna.Austin@deq.virginia.gov]
Sent: Wednesday, February 01, 2012 1:07 PM
To: Nicklas, Sharon
Subject: Materials Stored at Ches Liz

Hi Sharon,
Can you confirm that the following list is still the current materials stored at Ches Liz. Thanks!

> The materials stored onsite include sodium hypochlorite, sodium bisulfite, sodium hydroxide, ferric chloride, polymer, fuel oil, propane, ammonia, gasoline and diesel fuel. Materials are either stored in buildings with drains connected to the treatment system or are in contained areas. Fuel tanks are doubled walled.

Deanna Austin
DEQ-TRO Water Permits
5636 Southern Blvd
Virginia Beach, VA 23462
Phone: 757-518-2008
Fax: 757-518-2009

ATTACHMENT 7

SPECIAL CONDITIONS RATIONALE

VPDES PERMIT PROGRAM
LIST OF SPECIAL CONDITIONS RATIONALE

Name of Condition:

B. Additional Total Residual Chlorine (TRC) Limitations and Monitoring Requirements

Rationale: Required by Water Quality Standards, 9VAC 25-260-170, Fecal coliform bacteria; other waters. Also, 40 CFR 122.41(e) requires the permittee, at all times, to properly operate and maintain all facilities and systems of treatment in order to comply with the permit. This ensures proper operation of chlorination equipment to maintain adequate disinfection.

C. OTHER REQUIREMENTS OR SPECIAL CONDITIONS

1.a. Sludge Reopener

Rationale: Required by the VPDES Permit Regulation, 9 VAC 25-31-220 C., and 40 CFR 122.44 (c)(4), which note that all permits for domestic sewage treatment plants (including sludge-only facilities) include any applicable standard for sewage sludge use or disposal promulgated under Section 405(d) of the Clean Water Act.

1.b. Water Quality Standards Reopener

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-220 D requires effluent limitations to be established which will contribute to the attainment or maintenance of water quality criteria.

1.c. Nutrient Reopener

Rationale: 9 VAC 25-40-70 A authorizes DEQ to include technology-based annual concentration limits in the permits of facilities that have installed nutrient control equipment, whether by new construction, expansion or upgrade. 9 VAC 25-31-390 A authorizes DEQ to modify VPDES permits to promulgate amended water quality standards.

1.d. Nutrient Removal Facilities Reopener

Rationale: 9 VAC 25-40-70 A authorizes DEQ to include technology-based annual concentration limits in the permits of facilities that have installed nutrient control equipment, whether by new construction, expansion or upgrade.

1.e. Total Maximum Daily Load (TMDL) Reopener

Rationale: For specified waters, Section 303(d) of the Clean Water Act requires the development of total maximum daily loads necessary to achieve the applicable water quality standards. The TMDL must take into account seasonal variations and a margin of safety. In addition, Section 62.1-44.19:7 of the State Water Control Law requires the development and implementation of plans to address impaired waters, including TMDLs. This condition allows for the permit to be either modified or, alternatively, revoked and reissued to incorporate the requirements of a TMDL once it is developed. In addition, the reopener recognizes that, in according to Section 402(o)(1) of the Clean Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit.

Specifically, they can be relaxed if they are the result of a TMDL, basin plan or other wasteload allocation prepared under Section 303 of the Act.

2. Licensed Operator Requirement

Rationale: The Permit Regulation, 9 VAC 25-31-200 D and Code of Virginia 54.1-2300 et. seq., Rules and Regulations for Waterworks and Wastewater Works Operators (18 VAC 160-20-10 et seq.) requires licensure of operators.

3. Reliability Class

Rationale: Required by Sewage Collection and Treatment Regulations, 12 VAC 5-581-20 and 120 for all municipal facilities.

4. CTC, CTO and O & M Manual Requirements

Rationale: Required by the State Water Control Law, Section 62.1-44.19; the Sewage Collection and Treatment Regulations (12 VAC 5-581 et seq); Section 401 of the Clean Water Act; 40 CFR 122.41(e); and the VPDES Permit Regulation (9 VAC-25-31-190E).

5. 95% Design Capacity Notification

Rationale: Required by the VPDES Permit Regulation, 9 VAC 25-31-200 B.2. for all POTW and PVOTW permits. Best professional judgement is used to apply this condition to other (private) municipal treatment facilities.

6. Alternate Discharge Point - Outfall 002

Rationale: This condition originated under 9 VAC 25-31-190.M. of the VPDES permit regulation and section MN of the VPDES Permit Manual that addresses bypasses under specific conditions. Because all treatment processes must be utilized prior to discharging to the alternate location, this discharge does not meet the definition of a bypass. A BPJ decision was made to include a reference to this alternate discharge point on the Part I.A. page and further address this discharge point in a special condition. This is similar to the way alternate discharge points in other VPDES permits have been addressed by the Agency. The language of the condition is based on BPJ to address the alternate discharge location, differentiate this treated discharge from an actual bypass at the treatment facility and address EPA comments on bypasses in VPDES permits. It was a BPJ decision to require reporting similar to reporting requirements under the bypass condition in 9 VAC 25-31-190.M., in accordance with the Permit Manual. Since the discharge is fully treated, it is a BPJ decision that there is no need for specific discharge criteria or conditions in order to discharge from this alternate discharge point. Previous data have been reviewed and the determination has been made that dilution is not an issue for the treated wastewater to meet water quality standards, including the general standard. Additional toxicity sampling may be requested at 100% effluent to demonstrate continued compliance with the general standard.

7. Quantification Levels Under Part I.A.

Rationale: States are authorized to establish monitoring methods and procedures to compile and analyze data on water quality, as per 40 CFR part 130, Water Quality Planning and Management, subpart 130.4. Section b. of the special condition defines QL and is included per BPJ to clarify the difference between QL and MDL.

8. Compliance Reporting Under Part I.A.

Rationale: Defines reporting requirements for toxic parameters and some conventional parameters with quantification levels to ensure consistent, accurate reporting on submitted reports.

9. Effluent Monitoring Frequencies

Rationale: The incentive for reduced monitoring is an effort to reduce the cost of environmental compliance and to provide incentives to facilities which demonstrate outstanding performance and consistent compliance with their permits. Facilities which cannot comply with specific effluent parameters or have other related violations will not be eligible for this benefit. This is in conformance with Guidance Memorandum No. 98-2005 - Reduced Monitoring and EPA's proposed "Interim Guidance For Performance-Based Reduction of NPDES Permit Monitoring Frequencies" (EPA 833-B-96-001) published in April 1996.

10. Indirect Dischargers

Rationale: Required by VPDES Permit Regulation, 9 VAC 25-31-200 B.1. for POTWs and PVOTWs that receive waste from someone other than the owner of the treatment works.

11. Sludge Management Plan

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-420, and 40 CFR 503.1 specify the purpose and applicability for sludge management plans. The VPDES Permit Regulation, 9 VAC 25-31-100 J.4., also sets forth certain detailed information which must be included in a sludge management plan. The VPDES sewage sludge permit application form and its attachments constitute the sludge management plan and will be considered for approval with the VPDES permit. In addition, the Biosolids Use Regulation, 12 VAC 5-585-330 and 340, specifies the general purpose and control requirements for an O&M manual in order to facilitate proper O&M of the facilities to meet the requirements of the regulation.

12. Total Phosphorus-Nutrient reporting calculations

Rationale: §62.1-44.19:13 of the Code of Virginia defines how annual nutrient loads are to be calculated; this is carried forward in 9 VAC 25-820-70. As annual concentrations (as opposed to loads) are limited in the individual permit, this special condition is intended to reconcile the reporting calculations between the permit programs, as the permittee is collecting a single set of samples for the purpose of ascertaining compliance with two permits.

13. Suspension of concentration limits for E3/E4 facilities

Rationale: 9 VAC 25-40-70 B authorizes DEQ to approve an alternate compliance method to the technology-based effluent concentration limitations as required by subsection A of this section. Such alternate compliance method shall be incorporated into the permit of an Exemplary Environmental Enterprise (E3) facility or an Extraordinary Environmental Enterprise (E4) facility to allow the suspension of applicable technology-based effluent concentration limitations during the period the E3 or E4 facility has a fully implemented environmental management system that includes operation of installed nutrient removal technologies at the treatment efficiency levels for which they were designed.

D. PRETREATMENT

Rationale: The permit regulation, 9 VAC 25-31-10 et seq., Part VII, establishes the legal requirements for State, local government and industry to implement National Pretreatment Standards. The Pretreatment Standards are implemented to prevent POTW plant pass through, interference, violation of water quality standards or contamination of sewage sludge. The regulation requires POTWs with a total design flow greater than 5 MGD with significant or categorical industrial input to establish a Pretreatment Program. The regulation also may apply to POTWs with design flows less than 5 MGD if circumstances warrant control of industrial discharges.

E. TOXICS MANAGENENT PROGRAM (TMP)

Rationale: To determine the need for pollutant specific and/or whole effluent toxicity limits as may be required by the VPDES Permit Regulation, 9 VAC 25-31-220 D. and 40 CFR 122.44 (d). See Attachment 9 of this fact sheet for additional justification.

ATTACHMENT 8

TOXICS MONITORING/TOXICS REDUCTION/ WET LIMIT RATIONALE

MEMORANDUM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

TIDEWATER REGIONAL OFFICE

5636 Southern Boulevard Virginia Beach, VA 23462

SUBJECT: Toxics Management Program (TMP) testing for HRSD-Chesapeake Elizabeth Plant (VA0081264)

TO: Fact Sheet

FROM: Deanna Austin

DATE: 2/7/12

COPIES:

HRSD-Chesapeake/Elizabeth plant is a major municipal discharger (design flow 24 MGD) of treated domestic sewage. Discharge from outfall 001 to the Chesapeake Bay will continue to be monitored for toxicity during this permit term.

There has been no change in the dilution from the previous permit; therefore the nearfield (acute) dilution factor (115) remains the same. The following calculation shows how the TU_a was derived.

Acute dilution = $100/IWC_a$

115=.100/IWCa

$100/115 = 0.87\%\ IWC_a$

LC_{50}= IWC/Acute Water Quality Instream criterion

LC_{50}= 0.87/0.3 = 2.9%

During the last few permit terms the LC_{50} of 2.9% was rounded to 3.0%. Due to antibacksliding regulations, a LC_{50} of 3.0% will be used again.

$TU_a = 1/LC_{50} \times 100$

$1/3.0 \times 100 = 33.33$

$TU_a = 33.3$

The following table details the results of the TMP tests for the last permit term. Since all data met the LC_{50}, a WET limit is not needed at this time and annual TMP testing should continue.

OUTFALL	DESCRIPT	SPECIES	SAMPLEDT	LC50	SURVIVAL	TU	TEST	LAB
001	1st Annual Acute	C.v.	05/08/07	11.2	100	<8.9	Acute	HRSD
001	2nd Annual Acute	C.v.	08/19/08	11.2	100	<8.9	Acute	HRSD
001	3rd Annual Acute	C.v.	11/18/09	11.2	100	<8.9	Acute	HRSD
001	4th Annual Acute	C.v.	05/19/10	11.2	100	<8.9	Acute	HRSD
001	5th Annual Acute	C.v.	01/25/11	11.2	100	<8.9	Acute	HRSD

001	1st Annual Acute	A.b.	05/08/07	11.2	100	<8.9	Acute	HRSD
001	2nd Annual Acute	A.b.	08/19/08	11.2	100	<8.9	Acute	HRSD
001	3rd Annual Acute	A.b.	11/18/09	11.2	100	<8.9	Acute	HRSD
001	4th Annual Acute	A.b.	05/19/10	11.2	100	<8.9	Acute	HRSD
001	5th Annual Acute	A.b.	01/25/11	11.2	100	<8.9	Acute	HRSD

C.v. - *Cyprinodon variegatus*
A.b. - *Americamysis bahia*

The following TMP language is recommended for the reissuance of the HRSD Chesapeake-Elizabeth permit (VA0081264).

E. TOXICS MANAGEMENT PROGRAM (TMP)

1. Biological Monitoring

a. In accordance with the schedule in 2. below, the permittee shall conduct annual acute toxicity tests for the duration of the permit. The permittee shall collect 24-hour flow-proportioned composite samples of final effluent from outfall 001 in accordance with Part 1.A. of this permit. The acute tests to use are:

48 Hour Static Acute test using Americamysis bahia and 48 Hour Static Acute test using Cyprinodon variegatus.

These acute tests shall be performed with a minimum of 5 dilutions, derived geometrically, for the calculation of a valid LC_{50}. Express the results as TU_a (Acute Toxic Units) by dividing 100/ LC_{50} for reporting. Both species should be analyzed at the same time from the 24-hour flow-proportioned composite sample. Toxicity samples shall be taken at the same time as the other chemical parameter monitoring listed in Part I.A. of this permit for outfall 001.

Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.

b. The permittee may provide additional samples to address data variability during the period of initial data generation. These data shall be reported and may be included in the evaluation of the effluent toxicity. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.

c. The test dilutions shall be able to determine compliance with the following endpoints:

(1) Acute LC_{50} of $\geq$3% equivalent to a TU_a of $\leq$ 33.3

d. All applicable data will be evaluated for reasonable potential at the conclusion of the test period. The data may be evaluated sooner if requested by the permittee, or if toxicity has been noted. Should evaluation of the data indicate that a limit is needed, a WET limit and compliance schedule will be required and the toxicity tests of D.1.a. may be discontinued. Permit specific limits in lieu of a WET limit may be added, should it be demonstrated that toxicity is due to specific parameters. The pollutant specific limits must control the toxicity of the effluent.

2. Reporting Schedule

The permittee shall report the results and supply **one** complete copy of the toxicity test reports to the Tidewater Regional Office in accordance with the schedule below. A complete report must contain a copy of all laboratory benchsheets, certificates of analysis, and all chains of custody.

(a)	**Conduct first annual TMP test for outfall 001 using Americamysis bahia and Cyprinodon variegatus**	**By December 31, 2013**
(b)	**Submit results of all biological tests**	**Within 60 days of the sample date and no later than January 10, 2014**
(c)	**Conduct subsequent annual TMP tests for outfall 001 using Americamysis bahia and Cyprinodon variegatus**	**By December 31, 2014, 2015, and 2016**
(d)	**Submit subsequent annual biological tests**	**Within 60 days of the sample date and no later than January 10, 2015, 2016, and 2017**

ATTACHMENT 9

RECEIVING WATERS INFO./ TIER DETERMINATION/STORET DATA/ STREAM MODELING

Planning Permit Review

Date: 12/16/2011

To: Kristie Britt, TRO

Permit Writer: Deanna Austin

Facility: HRSD-Chesapeake-Elizabeth STP

Permit Number: VA0081264

New or Renewal: Renewal

Permit Expiration Date: 10/15/2012

Waterbody ID: VAT C07E (Chesapeake Bay)-Outfall 001 VAT C08E (Little Creek Harbor (Cove))-Outfall 002 and stormwater outfalls-003 and 004

Topo Name: **034B Little Creek**

Facility Address 5332 Shore Drive Virginia Beach VA 23455

Receiving Stream:

Stream Name: Chesapeake Bay-001	
Click here to enter text.	
Stream Data Requested? Click here to enter text.	
Outfall #: 001	**Lat Lon: 36 56 12 76 10 10**
Outfall #: Click here to enter text.	**Lat Lon:** Click here to enter text.
Outfall #: Click here to enter text.	**Lat Lon:** Click here to enter text.
Outfall #	**Lat Lon:** Click here to enter text.
Stream Name (2): Little Creek Cove	
All stormwater outfalls are not monitored-No Exposure Certifications have been given	
Stream Data Requested? Click here to enter text.	
Outfall #: 003	**Lat Lon: 36 54 25 76 9 50**
Outfall #: 004	**Lat Lon: 36 54 29 76 9 58**
Outfall #: 002	**Lat Lon: 36 54 42 76 9 43**

Planning Review:

303 (d): Indicate Outfalls which discharge directly to an impaired (Category 5) stream segment	
Outfall 001 discharges to impaired AU VACB-R01E_CB8 for PCBs and SAV. Outfall 002 through Outfall 004 discharge to impaired AU VAT-C08E_LCC01A08 for PCBs and SAV. See Attachment 1.	
Click here to enter text.	
Tier Determination	
Tier	Both the Chesapeake Bay and the Little Creek Cove area for the discharge outfalls are Tier 1 waters. See Attachment 1.
Tier	
Management Plan	
Is the facility Referenced in a Management Plan?	No

Review will be completed in 30 days of receipt of request.

Additional Comments:

KNB 12/27/2011

4. Does the fact sheet document that a "reasonable potential" evaluation was performed?	X		
a. If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures?	X		
b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?	X		
c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have "reasonable potential"?			X
d. Does the fact sheet indicate that the "reasonable potential" and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations)?	X		
e. Does the permit contain numeric effluent limits for all pollutants for which "reasonable potential" was determined?			X
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?	X		
6. For all final WQBELs, are BOTH long-term AND short-term effluent limits established?		X	
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?	X		
8. Does the record indicate that an "antidegradation" review was performed in accordance with the State's approved antidegradation policy?	X		

II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters and other monitoring as required by State and Federal regulations?	X		
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?	X		
3. Does the permit require at least annual influent monitoring for BOD (or BOD alternative) and TSS to assess compliance with applicable percent removal requirements?		X	
4. Does the permit require testing for Whole Effluent Toxicity?	X		

II.F. Special Conditions	Yes	No	N/A
1. Does the permit include appropriate biosolids use/disposal requirements?	X		
2. Does the permit include appropriate storm water program requirements?	X		

II.F. Special Conditions – cont.	Yes	No	N/A
3. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?			X
4. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?	X		

5. Does the permit allow/authorize discharge of sanitary sewage from points other than the POTW outfall(s) or CSO outfalls [i.e., Sanitary Sewer Overflows (SSOs) or treatment plant bypasses]?		X	
6. Does the permit authorize discharges from Combined Sewer Overflows (CSOs)?		X	
a. Does the permit require implementation of the "Nine Minimum Controls"?			X
b. Does the permit require development and implementation of a "Long Term Control Plan"?			X
c. Does the permit require monitoring and reporting for CSO events?			X
7. Does the permit include appropriate Pretreatment Program requirements?	X		

II.G. Standard Conditions	Yes	No	N/A
1. Does the **permit** contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?	X		

List of Standard Conditions – 40 CFR 122.41

Duty to comply
Duty to reapply
Need to halt or reduce activity not a defense
Duty to mitigate
Proper O & M
Permit actions
Property rights
Duty to provide information
Inspections and entry
Monitoring and records
Signatory requirement
Bypass
Upset
Reporting Requirements
Planned change
Anticipated noncompliance
Transfers
Monitoring reports
Compliance schedules
24-Hour reporting
Other non-compliance

2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for POTWs regarding notification of new introduction of pollutants and new industrial users [40 CFR 122.42(b)]?	X		

Chronology

Tuesday, February 07, 2012

Facility Name: HRSD - Chesapeake-Elizabeth Sewage Treatment Plant *VA0081264*

Event	*Date*	*Comment*
Application fee deposited:	—	NA-Reissuance
VDH concurrence on draft permit:	—	NA-DP not requested
VMRC concurrence on draft permit:	—	NA-DP not requested
Site visit:	— 5/13/2010	
Site inspection report:	— 5/21/2010	
Reissuance letter mailed:	— 10/28/2011	
Application Administratively complete:	— 12/8/2011	
Application received at RO 1st time:	— 12/8/2011	
Application totally / technically complete:	— 12/8/2011	
First Application Reminder Phone Call:	— 12/8/2011	Application Received
Public notice authorization received from owner:	— 12/8/2011	
Second Application Reminder Phone Call:	— 12/8/2011	Application Received
App sent to State Agencies (list in comment field):	— 12/14/2011	Sent to VDH, DSS and VMRC via FTP site
App complete letter sent to permittee:	— 12/20/2011	
Comments rec'vd from State Agencies on App:	— 2/1/2012	VDH (1/10/12) DSS 2/1/12
Draft permit developed:	— 2/7/2012	
Old expiration date:	— 10/25/2012	
First DMR due:	— 12/10/2012	
Permit expires:	— 10/26/2017	